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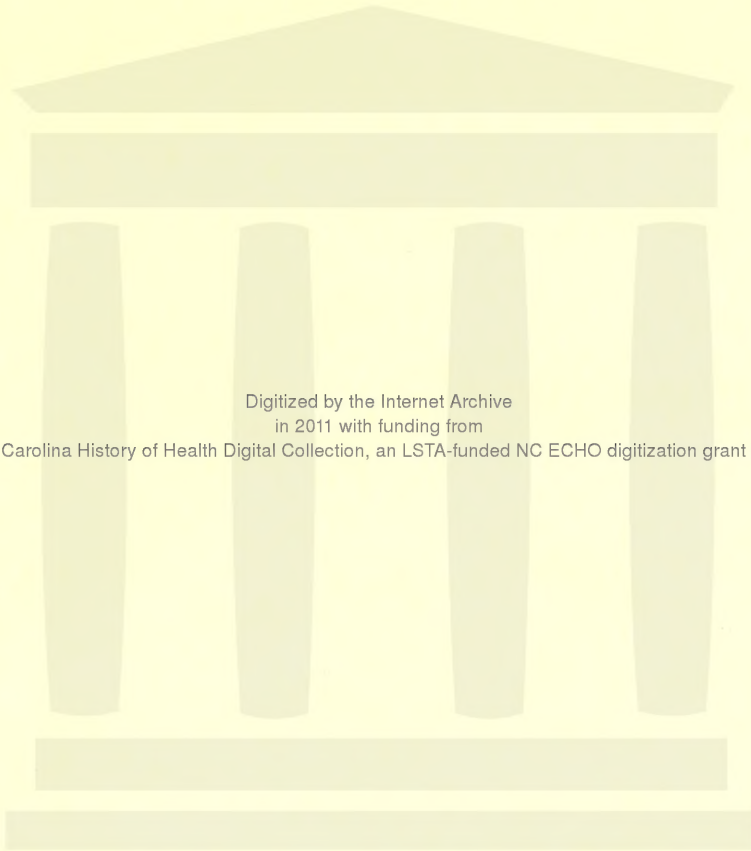

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JANUARY 1988 VOLUME 68 NUMBER 1

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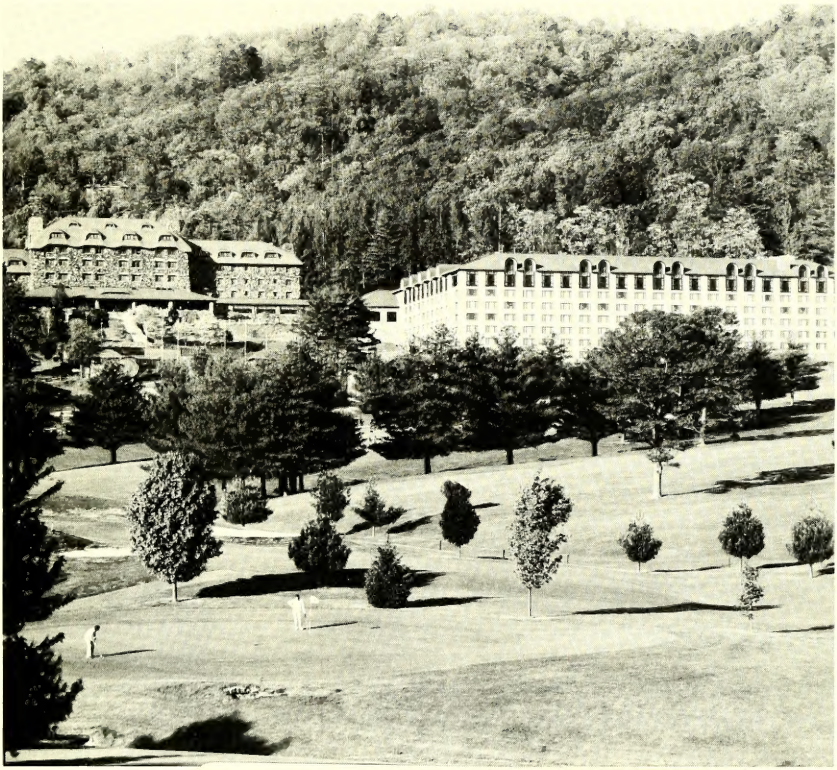

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CAMPBELL UNIVERSITY DEDICATES DRUG INFORMATION CENTER

Campbell University held dedication ceremonies today for its new Drug Information Center, located in the Carrie Rich Memorial Library on the Campbell campus. Sponsored by a corporate grant from Glaxo, Inc., a large pharmaceutical manufacturer located in the Research Triangle Park, the Campbell Drug Information Center operates as part of the university's School of Pharmacy. Its primary purpose is to provide on-the-job training to Campbell pharmacy students. The Drug Center also has a toll-free number which local and area health care professionals can call for answers to drug-related questions.

In a luncheon address, Dr. William Edmondson, vice-president of government affairs and professional relations for Glaxo, Inc., said the Campbell Drug Center represents a "unique experiment of private industry and academic partnerships." He noted that the Campbell Drug Center offers "both prospects of growing and developing together to improve the communities with which we serve and to promote involvement leading to unique and cost-effective health care products and services for the citizens of North Carolina and country."

Edmondson concluded his remarks by saying: "The similarities between Glaxo and Campbell University School of Pharmacy are abundantly clear. We are both young, staffed with the best talent the profession can provide, and fueled with a determination for growth and success unparalleled in our profession."

In brief remarks at today's luncheon, Dr. Norman Wiggins, president of Campbell University, called the new Drug Center an "anti-worrying center."

"Diseases which have decimated our race for ages are now under control, the mortality rate of many others has been greatly reduced and the average duration of human life extended many fold," said Wiggins. "The opening of the drug center is yet another step in the extension of good health and long life."

Campbell's Drug Information Center is under the direction of Dr. Constance McKenzie, who joined the Campbell Pharmacy School faculty in August 1987. Dr. McKenzie said the Drug

Participating in January 22 ribbon-cutting ceremonies for Campbell University's new Drug Information Center were (left to right), Robert E. Coughlin, manager of professional and trade relations for Glaxo, Inc.; Jim Butler, Glaxo vice-president for sales; Dr. William Edmondson, Glaxo vice-president for government affairs and professional relations; Dr. Norman A. Wiggins, president of Campbell University; and Dr. Ronald Maddox, dean of the Campbell University School of Pharmacy.

Center will publish a quarterly newsletter which will be distributed to various pharmacy practitioners in North Carolina. The toll-free telephone number for the Drug Information Center (available to physicians, nurses, pharmacists and others in the health care field) is: 1-800-327-5467.

PROGRESS REPORT ON THE PHARMACY EXHIBIT IN THE NC MUSEUM OF HISTORY

To: The Committee for the Installation of a 1925 Pharmacy Exhibit At The North Carolina Museum of History

From: W. J. Smith, Chairman

The current year will be an important one for the committee since ground breaking for the new North Carolina Museum of History building will take place this summer. Also, our effort to assemble the essential pharmacy inventory/equipment artifacts will continue.

On January 15, we met with the public relations staff of R.J. Reynolds/Nabisco in Winston-Salem. As a result, we now have some RJR artifacts of the 1925 era and a tentative promise for further cooperation.

For the time being, the artifacts have been labeled and stored in our attic or in the case of the botanicals contributed by the UNC School of Pharmacy, in the Institute of Pharmacy. Later on, we anticipate using storage space in the Kerr Drug warehouse, Raleigh.

While we have not announced any fund raising on behalf of the pharmacy museum, some members of the committee, with knowledge of our initial goal of $10,000, sent checks in late 1987. The individual contributions were $1000, $1000, $500, $400 and $100 for a total of $3000.00.

Any person, firm, corporation or foundation making a contribution to underwrite expense of the pharmacy museum will be publicly recognized in a book to be placed in the museum. At that time, the contributors mentioned above and those who contribute later, will be recognized by name. Our current list already totals more than 25 individuals and firms, such as RJR/Nabisco.

If you have knowledge of any 1925 era pharmacy artifact (inventory or equipment-fixture), a letter or telephone call will be appreciated.

INSURANCE CLAIMS

The St. Paul Insurance Company has reported the number of drug-related claims against physicians increased 78% between 1979 and 1984. The Medical Insurance Exchange of California claims that one out of ten professional liability lawsuits in this country involves medications, with the average cost of drug-related actions now exceeding $25,000. It has been reported that the leading claims in drug-related lawsuits are that the physician did not consider the drug's side effects, used the incorrect drug, mistakenly prescribed an overdose, or improperly prescribed to a drug-dependent individual.

The Exchange warns that "poor handwriting can be misinterpreted by the pharmacist with equally disastrous results." Further guidelines are provided to prevent malpractice claims including: (1) using a medication control record and indicating the pharmacy involved with each prescription refill, (2) writing legibly with careful attention to abbreviations so that pharmacists clearly understand the instructions, (3) avoid prescribing for another physician's patient, (4) reevaluating long-term medications periodically, (5) securing prescription pads so that they cannot be stolen, and (6) taking special precautions with elderly patients who may take many medications at different times of the day.

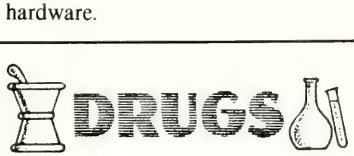
QS/1 SELECTED BY OLYMPIC COMMITTEE

The XV Olympic Games Organizing Committee selected the QS/1 Pharmacy System, produced by Smith Data Processing, as the software to be used in the Olympic Dispensary.

The QS/1 system was used to fill prescriptions, check for drug interactions and allergies, and maintain a record of what was prescribed for athletes, coaches, and staff of those competing in the Winter Olympics in Calgary.

The dispensary was staffed by volunteer pharmacists from Alberta.

Smith Data Processing is a Spartanburg, SC based company that services over 2,300 pharmacies in the United States and Canada with the QS/1 pharmacy computer system which uses IBM hardware.



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STRESS AND HEART DISEASE: WHAT DOES THE EVIDENCE INDICATE?

by Jim Robert S. Eliot, M.D.
National Center of Preventive and Stress Medicine
Phoenix, Arizona

From the time they first met eight years ago, Fred and Tami had been inseparable. Then, quite by accident, Fred's doctor found a lump under Fred's arm during a routine physical examination. It was soon diagnosed as lymphoma. Fred had less than a year to live. The cancer spread quickly to his vital organs, and he died shortly after surgery to remove the growth.

Tami became distraught. She refused to eat and couldn't sleep. One morning, only two weeks after Fred's death, Tami died. Cause of death unknown. Was it a "broken" heart? Remarkably, Fred and Tami were Siamese cats.

What Do People Think?

When a group of people were asked what they thought caused heart disease, 55 percent said stress and 24 percent bad diet. In fact, cardiovascular disease is a complex problem with multiple causes. Established primary risk factors include smoking, high blood pressure and elevated blood cholesterol levels.[1 (p. 683)] Yet it appears that these risk factors account only in part for the high incidence of heart disease in the United States.

The American Heart Association estimates that nearly one million people died of cardiovascular diseases in 1984. In about half of all patients treated for these diseases, the primary risk factors were not present at all. Heredity is one of the missing links. But is it possible that stress or other psychological factors provide other links?

"Since We Cannot Define Stress, We Cannot Measure It . . . Yet We Must"

One man's meat is another man's poison. Just so the causes of stress, which are identified variously according to the person experiencing it. But despite the difficulties involved in defining stress, researchers must do so in order to measure its effects scientifically. According to one definition, stress results when the demands put upon an individual exceed that person's ability to perform or function adequately. A difficult situation, for example, can produce a high degree of uncertainty, which in turn provokes extreme stress in some individuals.

Similarly, stress may be induced by the feeling that one has lost control over a situation or by the fear that one cannot ever establish control. In the British Civil Service, administrative supervisors often experience acute pressure in the course of carrying out their responsibilities, but heart disease is more common in the lower grades, where workers are not so pressed but have little control over their situation.

Nonetheless, studies have shown that the negative impact stress can have on the cardiovascular system can be largely offset by a supportive, intimate relationship.

The Human Stress Response

The body reacts to short-term stress with the familiar "fight or flight" response. This primitive biological reaction occurs when your nervous system tells your body that something alarming is happening or is about to happen. It is triggered by the *sympathetic nervous system* and the adrenal glands (which produce the hormones norepinephrine and its relative, epinephrine, also known as adrenaline). A sudden release of adrenaline will produce an increase in heart rate, blood pressure, respiration, and muscle tone. Chronic stress can prolong some of these effects.

Other important physiological responses to stress include release of the sex hormones — estrogen, testosterone and progesterone — and the corticosteroids, such as cortisol. Exposure to excess corticosteroids during prolonged stressful periods can cause retention of sodium and water, resulting in acute attacks of high blood pressure.

Emotional stress also causes blood platelets, which are involved in the clotting process, to become sticky and to adhere to the walls of blood vessels. This can be the first step to formation of a heart-attack-inducing clot. And it is an example of a direct mechanism whereby stress can cause a biological change that is clearly linked to cardiovascular disease.

Being a "Hot Number" May Not Be So Hot

The type A personality — ambitious, competitive, hostile, time-pressured — has, for some years, been thought to be at increased risk

continued on page 9

STRESS: NEW EVIDENCE OF ITS LINK TO CARDIOVASCULAR DISEASE

Recent findings suggest that the "hot reactor" — a person whose blood vessels constrict and blood pressure and heart rate rise when facing routine stresses —may be more vulnerable to cardiovascular disease than the competitive, time-pressured type A personality.

STRESS AND HEART DISEASE

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of developing cardiovascular disease compared with the more easy-going type B individual. However, stress reactions other than those associated with a person's apparent behavioral style may better predict vulnerability to cardiovascular disease.

Individuals can be categorized as either "hot" or "cold" reactors. Hot reactors experience blood vessel constriction and an increase in blood pressure and heart rate when confronted with routine but demanding tasks. Surprisingly, the type A personality does not necessarily exhibit a "hot" reaction to a taxing situation. Likewise, type B personalities are not always "cool" responders.

Hot reactors may learn to lessen this response through stress modification techniques such as biofeedback or relaxation-response training. Unfortunately, we note that many people who register normal blood pressure readings in the doctor's office are hot reactors in the more stressful situations common to everyday life.

Stress has also been implicated in cardiac arrhythmias and coronary artery spasms (constriction of blood vessels in the heart). Such cardiovascular irregularities can cause a sudden death or heart attack in the absence of blockage in a coronary artery.

Anxiety After a Heart Attack

Once a patient has had a heart attack, anxiety (mostly about death) usually peaks in the first two days. In some patients, anxiety may cause a slowing of the heart rate and an alarming drop in blood pressure, instead of the expected stimulation. This paradoxical response is due to an excessive release of acetylcholine — a chemical transmitter of nerve-cell messages — from the *parasympathetic* nervous system. Ordinarily this system functions to conserve energy, counteracting the adrenalinelike effects of the sympathetic nervous system and slowing the heartbeat. (Both divisions of this part of the nervous system work automatically and are not under conscious control.)

After a heart attack, patients may find it difficult to sleep because of fear, anxiety or depression. Lack of sleep can slow recovery. In this situation, the patient may be given an anti-anxiety drug if excessive daytime anxiety persists.

The Threat of Untreated Anxiety

The relationship between the mind and the heart is both romantic and pragmatic. At one time, the heart was considered the center of a person's being. Today, we perceive the brain-heart relationship as central. The two are joined by complex biochemical systems that respond to subtle changes in the functioning of either organ. In this context, short-term anxiety can be viewed as a normal response to a stressful event or serious illness. But prolonged and unchecked anxiety can be the root of illness that cripples both heart and mind.

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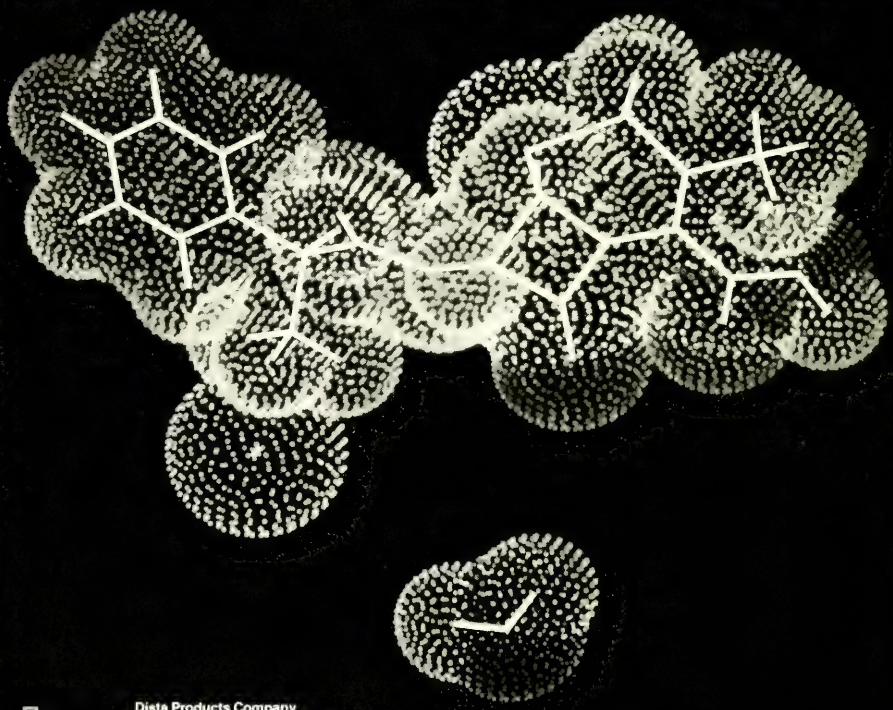

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DICKINSON'S PHARMACY
by Jim Dickinson

Mandatory counseling. Should pharmacists be required by law to counsel their patients? Possibly as a response to the challenge of mail-order operators and physician-dispensers, this question is being debated in a growing number of state legislatures.

For some pharmacists, like the middle-aged owner who questioned me at the Indiana Pharmacists Association meeting September 12, counseling is a double-edged sword — yes, mail-order firms can't do it, but what about our liability?

Coached by years of foreword-thinking pharmacist-attorneys like West Virginia University's David B. Brushwood and USP's Joseph G. Valentino, I told the questioner that the risk is so infinitesimal it's well worth grabbing with both hands.

A little-known fact is that no pharmacist has ever been penalized by a court for giving wrong advice; to the contrary, they are starting to be found guilty of *not* giving advice.

Self-serving lawyers who would advise pharmacists, and keep them nervous so that they will need more and more advice, have obscured that statistic.

They have also obscured another obvious point (nothing's obvious, however, when a skilled lawyer is busy frightening you): Even if a pharmacist is sued for giving wrong advice, it almost inevitably will boil down to one person's unsubstantiated word against another's, or in legal language, to "hearsay evidence."

The tide in favor of counseling is beginning to surge. It was even advised at the Indiana meeting by a pharmacy owner that his local Druggists' Mutual rep has been arguing that counseling will bring down pharmacists' insurance premiums.

But counseling isn't a clear-cut issue.

If a state law, explicitly written and enforced, requires counseling, then a great deal may be made by lawyers or professional "standards" that address counseling.

Frank Duckworth, a 1942 University of Florida pharmacy graduate who rose to corporate counsel status in Pfizer before becoming full-time president of the Food and Drug Law Institute last year, is among those legal scholars who worry about pharmacy's penchant for declaring professional goals to be "standards."

For example, in 1979, then-assistant executive director of the American Association of Colleges of Pharmacy John F. Schlegel (now president of the American Pharmaceutical Association) and APhA director of education Samuel H. Kalman proclaimed "Standards of Practice or the Profession of Pharmacy" based on five years of observation of what pharmacists (even one or two) do (or say they do) every day.

All of these are desirable goals for every pharmacist to aspire to, but Duckworth sees them with the lawyer's eye as potentially enforceable *legal* standards in the hands of a jury.

Giving the Fourth Annual Albert F. Wojcik Pharmacy Law Lecture at West Virginia University in September, Duckworth said:

"Some (standards) include statement of practice that are not generally accepted but rather are statement about what they hope will exist at some point in time. For instance, one set of these so-called 'standards' (Schlegel-Kalman) states that, in carrying out his duties the pharmacist 'assesses the patient's level of anxiety regarding the prescription/disease' — and 'explains to patient how to recognize the signs and/or symptoms that occur' — and 'advises patient how to minimize side effects' — and 'assesses whether patient understands explanation.'

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DICKINSON'S PHARMACY

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"All of this is done," Duckworth commented, "after the pharmacist has interrogated the patient about any predisposition to side effects, as well as 'signs and/or symptoms of potential problems,' has determined alternatives to 'present regimen,' and has ascertained the patient's 'life style,' compliance history, attitude toward disease and medication, physical and medical impairments, 'socioeconomic restraints,' and living conditions.

"Then the pharmacist is to determine what he believes the appropriate dosage regimen should be, consulting with the physician 'when necessary.'

"Do you believe that retail pharmacists now have, or should have, a legal duty to do these things? If they do, they are in a heap of trouble."

The "trouble" that Duckworth sees is that when such desirable goals to aspire to are labeled "standards of practice," or "codes, or even "guidelines," such labels create legal duties.

Now Duckworth admits he is of the old school, and he spoke at WVU with a certain nostalgia for the days when pharmacists only had to worry about how accurately they filled the prescription, leaving all other concerns to the physician.

He acknowledges that times have changed, and that pharmacists pursuing the new goals have a great deal to offer patients and physicians, both of which groups have also had change thrust upon them for good as well as for bad.

But he makes a narrow, limited point that is very valid, and that should not be taken by pharmacists as a caution against counseling.

That point is: Don't call these new roles and functions "standards" or "codes" or "guidelines," because lawyers also use those terms, in once in a blue moon they may try to make trouble for you (as already noted, counseling only boils down to one man's word against another, so the trouble won't be as awful as Duckworth fears).

I asked Brushwood about all this, and he agrees that a better word would be "goals." To *aspire* to.

And the dreadful legal consequences of counseling should be put in perspective, too, he says. For example, in the most famous new pharmacy liability case, *Riff v. Morgan,* where the pharmacist was held 65% liable for a failure to counsel at all, Brushwood thinks the judgment might have been softer if, instead of saying "There is no duty to warn," the pharmacist had said, "There is a duty and I observe it always, but in this case I did it differently."

That, Brushwood thinks, could have given the pharmacist the opening to place blame elsewhere and to explain how the pharmacist's duty can sometimes be met, in special circumstances, by not doing the obvious.

Brushwood's point has appeal. Almost invariably, the pharmacist pleads to the court, "I'm only a seller, and I have no other duties." Increasingly, as *Riff* makes clear, courts will not accept that.

And neither should anyone else.

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsiblity for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

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COMMON MYTHS ABOUT SLEEP AND THE ELDERLY

by J. Christian Gillin, M.D.
Professor of Psychiatry
University of California
San Diego, California

As a sleep disorders expert, I encounter many misconceptions about sleep that concern elderly patients in particular — perhaps because they're the group most likely to suffer from sleep disorders.

Some common misconceptions about sleep and older people include the following:

MYTH # 1: As We Grow Old, We Need Less Sleep Than We Did When We Were Younger.

Fact: The elderly may get less sleep, but their individual needs for a specific amount are relatively constant. As the body ages, the quality of sleep deteriorates. Sleep becomes less efficient and is often light and unrestful. By age 50 for men and 60 for women, sleep is usually devoid of the two deepest stages, those considered to be the most refreshing and restorative.

While the elderly are the group most prone to sleep problems, many of these difficulties can and should be treated.

MYTH # 2: Napping during the Day Will Not Interfere with Sleeping at Night.

Fact: Insomnia is often exacerbated by taking naps during the day. Napping almost always decreases the quality and quantity of nighttime sleep. Poor sleepers who catnap during the day also find that it usually takes longer to fall asleep at night. In rare cases, however, those who suffer from very severe insomnia may be too exhausted to fall asleep at night unless they have had a nap. For these people, sleep experts recommend taking a nap regularly at the same time each day.

MYTH # 3: A Nightcap before Bed Is a Good Sleep Aid

Fact: In the long run, alcohol makes sleep worse, not better. Although a shot of whiskey or a glass of wine may relax the weary insomniac enough to fall asleep, once the alcohol is meta-

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MYTH: AS WE GROW OLD, WE NEED LESS SLEEP

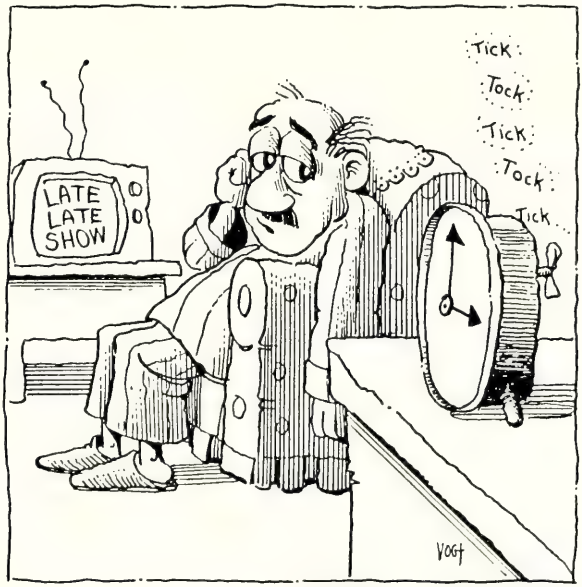

ILLUSTRATION — THE UPJOHN COMPANY

COMMON MYTHS

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bolized, the body enters a state of withdrawal. The result is frequent awakenings and a drop in the overall quality of sleep.

MYTH # 4: Snoring May Be Annoying, but It Is Not Dangerous

Fact: Snoring is no trivial matter. It almost always indicates that something is wrong with breathing during sleep. A particular pattern of very loud snoring accompanied by pauses in breathing that last from 20 to more than 100 seconds is a sign of a potentially life-threatening condition called *sleep apnea.* Sleep apnea tends to occur most often in elderly or overweight men and has been linked to high blood pressure, heart attacks and strokes. A 1987 study found that apnea occurred during sleep in 38 percent of the male patients over the age of 60 in the Veterans Administration Medical Center at San Diego.

Anyone may have occasional brief pauses in breathing during the night. Those with sleep apnea, however, stop breathing more than five times each hour, up to a minute or longer each time, and often wake up gasping for breath. (Individuals with sleep apnea should consult their physicians about taking sleep medications or drinking alcohol in the evening, as these substances may make their breathing difficulties worse.)

MYTH # 5: Sleep Medications Available over the Counter Are Safer than Prescription Drugs.

Fact: Nonprescription sleeping pills are not innocuous. Their active ingredient is antihistamine, which can produce disturbing side effects, including disorientation, dizziness, ringing in the ears, poor coordination, blurred or double vision and irritability. In addition, some antihistamines are long-acting and may produce carryover drowsiness the next day.

MYTH # 6: Sleeping Pills Are Never Safe for Elderly People.

Fact: While there is no perfect sleep medication, the National Institute of Mental Health has recommended the benzodiazepine group as the sleep medications of choice, emphasizing that elderly patients in particular should be prescribed the smallest effective dose for the shortest period of time.

Within the benzodiazepine group, however, those that are more rapidly eliminated from the body have been shown to be generally safer for elderly people. Triazolam (Halcion, Upjohn), for example, produces less drowsiness the next day than do longer-acting sleep medications. A recent study found that long-acting benzodiazepines may make elderly patients more likely to fall and suffer hip fractures. No such increase in falls was detected when patients received short-acting sleep medications.

The need for daytime alertness should be a major consideration whenever sleep medications are prescribed — particularly for the elderly to whom a fall can be a life-threatening event.

Fact: The elderly may ***get*** *less sleep, but their individual needs for sleep remain relatively constant. This group is the group most prone to sleep disorders.*

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Benton J. Moffett, ph-mgr.

Phar-Mor
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Revco Discount Drug Center
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Susan F. Stafford, ph-mgr.

Mecklenburg Co. Health Dept. — CMH (LSP)
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Charlotte, NC
Susan F. Stafford, ph-mgr.

Greenville Center (LSP)
1330 Spring St.
Charlotte, NC
Susan F. Stafford, ph-mgr.

Huntersville Annex (LSP)
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Huntersville, NC
Susan F. Stafford, ph-mgr.

Mecklenburg Co. Health Dept. (LSP)
2845 Beatties Ford Rd.
Charlotte, NC
Susan F. Stafford, ph-mgr.

Mecklenburg Co. Health Dept. (LSP)
249 Billingsley Rd.
Charlotte, NC
Susan F. Stafford, ph-mgr.

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Through their experience as pharmacists, we explored your concerns.

Through their insights as panelists, we discovered new ideas.

The members of our 1987 Pharmacy Consultant Panel spoke from personal experience. But their ideas and concerns spanned the breadth of our profession. We thank them for sharing their wisdom, experience and advice. Most of all, we look forward to putting their ideas to work to serve pharmacy professionals better.

Standing Left to Right:

Jack R. Cole, Pharmacist
Dean, College of Pharmacy
University of Arizona
Tucson, AZ

Reed Rosing, Pharmacist
Vice President, Hospital Sales
Bergen Brunswig Drug Company
Orange, CA

Thomas M. Ryan, Pharmacist
Vice President, Pharmacy Operations
Consumer Value Stores
Woonsocket, RI

William G. Thien, Pharmacist
Vice President
Health Services & Pharmacy Operations
Walgreen Drug Stores
Deerfield, IL

Darwyn J. Williams, Pharmacist
President
Williams Drugs Inc.
Webster City, IA

Seated Left to Right:

John H. Vandel, Pharmacist
President
Vandel Drugs, Inc.
Torrington, WY

Marily Rhudy, Pharmacist
President
Continental Pharmacy, P.A.
Topeka, KS

Thomas R. Temple, Pharmacist
Executive Director
Iowa Pharmacists Association
Des Moines, IA

M. Patricia Lee, Pharmacist
Director of Pharmacy
UCSD Medical Center
San Diego, CA

Upjohn

Not pictured: Bernard Mehl, Pharmacist, Director of Pharmacy Mount Sinai Hospital, New York, NY.
John J. Piacoro, Jr., Pharmacist, Associate Director Clinical Services Chandler Medical Center, Lexington, KY

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Delbert M. Cranford, ph-mgr.

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Fayetteville, NC
Janice L. Parry, ph-mgr.

Doctor's Family Care Centre (LSP) (T/O)
1673 Owen Drive
Fayetteville, NC
Janice L. Parry, ph-mgr.

Doctor's Urgent Care Centre (LSP) (T/O)
3412 Ramsey St.
Fayetteville, NC
Janice L. Parry, ph-mgr.

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Wm. T. Walker, ph-mgr.

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Orthopaedic Hospital of Charlotte (T/O)
1901 Randolph Rd.
Charlotte, NC
Ronald M. Geer, ph-mgr.

Thomas & Oakley Drug Store (T/O)
109 Main St.
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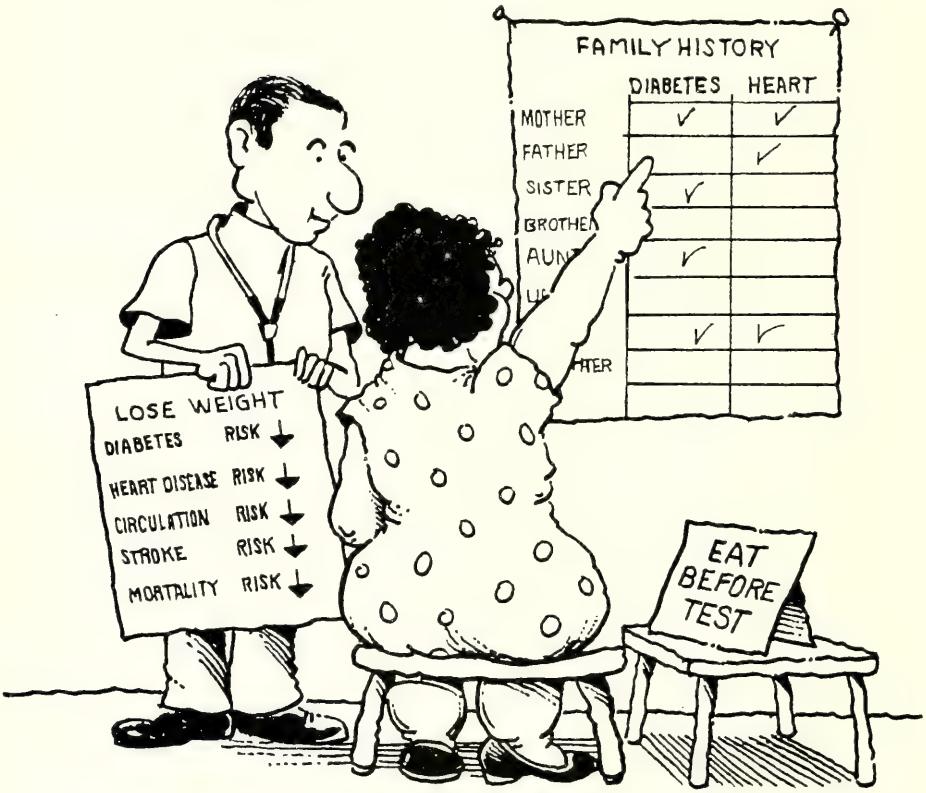

"Everyone who is overweight, especially if there is diabetes in the family, should have an annual blood sugar test after eating."

Experts on Diet and Non-Insulin-Dependent Diabetes
Consensus Conference—National Institutes of Health

TOO MUCH WEIGHT AND DIABETES — Dealing with the Deadly Duo

by Charles M. Peterson, M.D.
Director of Research
Sansum Medical Research Foundation
Santa Barbara, California

Weight, it sometimes seems, has replaced weather as the topic about which we talk most and do least.

That's not to say Americans are not dieting. More than half are on a diet at any one time, according to most estimates. But many people in the other half must be gaining even more at the same time. Annual food consumption was 20 pounds higher per person in 1983 than in 1963. People also consumed a higher percentage of fats and oils.

For the 10 million Americans who have non-insulin-dependent diabetes, weight and what to do about it is a particularly serious problem. An estimated 80 percent of them are obese (more than 20 percent above normal body weight) when their disease is diagnosed. The excess weight can both accelerate their diabetes and bring on its complications, first and foremost cardiovascular disease and stroke.

As one of my colleagues bluntly puts it: "If you want to find out if there's a possibility of getting diabetes . . . just keep on eating and get fat . . . you (can) do other things, too, but the main thing is get fat."

In fact, the American Diabetes Association has coined the term "diabesity" to describe the overweight factor in diabetes development. In the early stages of non-insulin-dependent diabetes, by far the most common type of the disease, losing weight can actually cause diabetes to disappear.

Diet and non-insulin-dependent diabetes was the subject at a recent National Institute of Health (NIH) consensus conference. All 14 members of the expert panel had one message for those with excess poundage: Lose it! In a news conference they went even further — recommending annual postprandial (after a meal) blood sugar tests for all overweight individuals, especially if they have a family history of diabetes.

the NIH consensus conference suggests that "moderate caloric restriction" of from 500 to 1,000 calories below daily requirements may be helpful for overweight diabetic and not-yet-diabetic individuals alike. This is similar in calories to the low-fat "prudent diet" proposed for all adults by the American Heart Association — to defend against atherosclerosis (the build up of debris in blood vessels that leads to clots, heart attacks and strokes). Since those who have diabetes are two to three times more likely than those who don't to die of such complications, the similarity makes sense.

Does this mean that a single diet may be effective against two major causes of death — heart disease and diabetes?

Unfortunately, things are seldom so simple. True, the "prudent diet" can lower both blood sugar and blood fats. However, reducing fat to 30 percent of the calories we consume, as recommended, raises carbohydrates to 50 to 60 percent of the diet since protein remains at 10 to 20 percent. This increase may not be good for all non-insulin-dependent diabetes patients.

The higher carbohydrate levels may actually promote atherosclerosis and high blood pressure in some patients. How? By lowering protective HDL (high-density lipoprotein) and increasing the risk-raising LDL and VLDL (low- and very-low-density lipoproteins). In addition, such diets often raise blood sugar — that other risk factor for vascular disease.

Just losing weight will raise HDL and reduce other blood fats as well as blood sugar, emphasizes the NIH panel. Once the blood sugar is normal, diabetic patients can reduce dietary fats further in search of lower VLDL and LDL cholesterol, lower triglycerides and diminished atherosclerosis risk. Recent studies also suggest cutting back on protein may help those with kidney disease.

One panel recommendation gives the diabetic individual the chance to eat more the way the rest of us do. Some sugar (sucrose) as a "taste additive" is OK — if this doesn't raise the blood sugar (glucose) levels and if the person is not overweight. Persons with "diabesity" must still count the calories and use sugar only to the extent that it does not raise blood sugar.

The NIH panel called studies of fiber's ability to lower blood sugar and cholesterol inconclusive and emphasized that patients on a high-fiber diet may not absorb calcium and other minerals properly — leading to brittle bones. Diabetic

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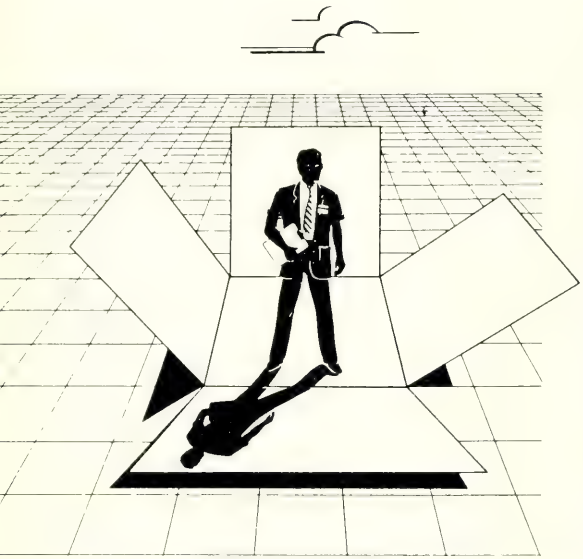
YOUR ROLE IN HEALTH CARE IS CHANGING.



SO IS OURS.

Pressures for change in the practice of pharmacy are coming from within the profession and from without. As a key member of the health care delivery team, you need to be aware of the economic and professional forces that are driving these changes.

Marion Laboratories believes that the better you're prepared for these changes, the more you'll benefit, both personally and professionally, from this new environment. That's why Marion sponsors annual leadership conferences for new presidents of state pharmacy associations. That's also why Marion recently joined with *Drug Topics* magazine to fund a study on the effects that HMOs and PPOs are having on the practice of pharmacy.

By supporting pharmacy programs like these, Marion hopes to make these changes more understandable and worthwhile for you. It's Marion's way of making our commitment to your profession felt, not just in words, but by positive, useful actions.

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TOO MUCH WEIGHT

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individuals with nerve damage may not notice gastrointestinal irritation and damage from fiber (roughage). For those who want to replace other carbohydrates with fiber, the panel suggests soluble fibers (barley, beans, peas) rather than bran (insoluble) or purified supplements.

Carbohydrates in certain foods, like potatoes, raise blood sugar more rapidly than those in others — rice and lentils, for instance. However, so many other factors — cooking time, storage, processing, other foods in a meal — interact with specific carbohydrate-containing foods that the NIH panel concludes ranking foods by this "glycemic index" is unreliable. Nevertheless, each individual with diabetes is encouraged to document his or her own responses to different foods with an after-meal glucose check.

Disagreement among experts over different dieting strategies probably contributes to the hot-and-cold attitude of Americans towards losing weight, whether or not they have diabetes. However, all the experts agree with dieters on the major reason for not getting or keeping pounds off — it's very, very difficult to do.

Many possible explanations are being explored. Genes appear to play a part in both obesity and diabetic obesity, though fatness is not inherited as blue eyes are. Some people may be "food efficient," able to store food energy as fat and resist losing it when the body demands more energy. In addition, researchers have found that nervous system defects may scramble signals that mean "stop eating; you've had enough" or "burn up those extra calories; don't store them." Meanwhile, opposing signals to "overeat!" may be coming from the body's fat cells themselves.

A biologic system that regulates body weight has probably been around unchanged a long time. However, until it's identified and understood there's obviously no way to change it to meet today's demands.

Feel you can't beat the system? Don't throw up your hands so quickly. Though "crash" diets and "miracle" weight loss formulas generally don't succeed in the long term and may be dangerous, behavior change can be produced by psychological counseling, nutritional education, peer group (people with the same problem) support and access to information and lower calorie foods. Losing weight is ***not*** just a matter of "willpower," as so long believed.

Here are some simple tricks that can help:

- Learn what triggers your eating. Then learn to control these cues.
- Don't keep large amounts of food on hand.
- Prepare meals rather than pick up a convenient snack.

What about exercise to lower weight in diabetic individuals? First of all, exercise without restricting calories doesn't result in weight loss. Its effects on blood sugar are, according to the NIH panel, quite variable and depend on the individual and the type of exercise, such as leg flexibility, strength training or cardiovascular conditioning. Exercise that requires straining and breath holding, like weight lifting, can be risky for patients with retinopathy (eye damage), high blood pressure and heart problems. Conditioning exercise, however, makes sense because of its cardiovascular benefits. Patients should choose something they can enjoy and expect to do often and over a lifetime, but not until they've been medically evaluated.

At the close of the NIH consensus conference on non-insulin-dependent diabetes and diet, George F. Cahill, M.D., vice president of the Howard Hughes Medical Institute, told reporters, "The biggest favor diabetics can do themselves is to lose weight and, should they regain it, take if off again."

I would add only that losing weight is also the biggest favor that those overweight and at risk of developing diabetes or heart disease can do themselves.

FIFTY-PLUS CLUB

If your were first registered as a pharmacist in 1938, you are eligible to be inducted into the "Fifty-Plus" Club of the North Carolina Pharmaceutical Association at the Annual Meeting in May. You have been licensed fifty years and richly deserve this recognition. Please call or write the NCPhA office and let us know. We will be reviewing the NC Board of Pharmacy Records but may miss someone. We will appreciate any assistance in identifying "50 +'s".

MAKING THE BEST USE OF GONDOLAS

by Warren Spear, R.Ph.

Over the years we have heard the greeting card people extol the virtues of long gondola runs. No supermarket would ever allow a break in gondolas. Line them up straight and line them up long to keep line of sight on the shelves. Right? Well, maybe. It depends on what we are trying to do and what we are trying to say. What may be right for a super market and a card shop may not be right for a community pharmacy.

When a customer is shopping for greeting cards they will often buy more than one. They tend to browse among the cards to find not only the card they need now but they often like to find cards that are appropriate for up coming events or occasions. Greeting cards tend to sell better when we have a "valley" with the customer able to browse without being in a high traffic area. By surrounding the customer with cards the customer tends to buy more because they are exposed to more card faces and are not distracted. When the customer is leaving the card "valley" we tempt them with just one more spinner of studio cards or other specials on the feature ends.

Grocery stores and warehouse type operations with tall gondolas of course want long straight lines to emphasize the volume of merchandise and to facilitate commodity type purchasing. Newer super markets recognize that certain products lend themselves to specialty merchandising and as such these products are set up on shorter display units. Note the treatment given wines, cheeses and flowers in the newer markets.

For community pharmacy there can be advantages to shorter gondola runs.

1. **Better circulation.** With shorter runs people tend to browse more. They circulate **around** the product groups.

2. **More feature ends.** Feature ends sell more merchandise than gondolas. Shorter runs allow for more feature ends which means you can sell more merchandise.

3. **Security.** It is easier arrange and line up shorter runs for security and control than it is with long runs. Since shrinkage due to shoplifting comes right off the bottom line, good control is imperative.

Long runs have their place in commodity merchandising. Shorter runs put the emphasis on the product group or category. The skillful use of both concepts is needed in community pharmacy when we use our commodity products to bring customers through the store and we use our specialty products to enhance our image and bottom line.

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contact Gene Minton at Gene Minton Consulting Services, 6 Lake Shores, Littleton, NC 919-586-5465. (All client information held in strict confidence).

LOCAL NEWS

LOCAL PHARMACISTS RECEIVE RECOGNITION AWARD FROM MERCK SHARP & DOHME

Left to Right: Bobbye L. Ford, E. Gary Faulkner, Edward G. Faulkner, and Keith L. Tinkham.

WEST POINT, PA., February 10, 1988 — E. Gary Faulkner, R.Ph., and Edward G. Faulkner, Owners of Faulkner's Drug Store, 215 E. Jefferson Street, Monroe, N.C., are recipients of the MSD Pharmacist Recognition Award. They are residents of Monroe.

The award was established by Merck Sharp & Dohme (MSD), the U.S. prescription drug division of Merck & Co., to recognize business and civic achievements of pharmacists. The Faulkners were cited for 85 years of combined service to retail pharmacy.

The award was presented by Senior Professional Representative Keith L. Tinkham and Professional Representative Bobbye L. Ford of Merck Sharp & Dohme.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

Nowhere was the beauty of Christmas more evident than in the home of Mr. and Mrs. Jesse Oxendine when the Charlotte Woman's Pharmaceutical Auxiliary met Tuesday, December 8, for their annual Christmas meeting. Jewell had made every room in their home a reminder of Christmas. Members enjoyed touring the rooms, getting ideas we could use.

Mrs. Mercer Smith displayed an afghan she had made for the Auxiliary to use in its fund raising drive for its scholarship. The members exchanged gifts as well as wishes for a Merry Christmas and a Happy New Year.

Virginia Steele
Recording Secretary

January, 1988

NIH PANEL ISSUES NEW GUIDELINES FOR TREATMENT OF HIGH CHOLESTEROL

The first recommendations for diagnosis and treatment that apply to adults of all ages and both sexes.

The first specific guidelines for identifying and treating adults at risk for coronary heart disease because of elevated blood cholesterol were issued in October by the National Cholesterol Education Program Adult Treatment Panel.

At least a quarter of the adult U.S. population — more than 40 million Americans — should be under treatment for high cholesterol, estimates this expert panel, which was organized by the National Heart, Lung, and Blood Institute of the National Institutes of Health. The experts recommended that all people over age 20 have their cholesterol levels checked as part of their general medical examinations.

Evidence of a causal link between elevated cholesterol and coronary heart disease underlies the recommendations. Middle-aged men with the highest cholesterol levels — 245 milligrams per deciliter (245 mg/dl) or higher —have a death rate from coronary disease four times higher than men with levels under 182 mg/dl. In addition, clinical studies demonstrate that lowering cholesterol levels reduces the incidence of heart attacks by 2 percent for each 1 percent cholesterol reduction.

The National Cholesterol Education Program Adult Treatment Panel classifies total blood cholesterol measurements for males and females over 20 as follows:

- under 200 mg/dl = desirable
- 200-239 mg/dl = borderline-high
- 240 mg/dl and above = high

The panel suggests that people with over 200 mg/dl be rechecked to confirm the original blood cholesterol measurement. Patients whose second blood test confirms that they are in the borderline-high category (200-239 mg/dl) and who don't have other cardiovascular risk factors should be given dietary education and followed up annually.

The other risk factors include being male; having a family history of premature heart disease (a parent's or sibling's heart attack or sudden death before 55); smoking more than 10 cigarettes daily; high blood pressure; having low HDL-cholesterol (below 35 mg/dl, confirmed by repeat measurement), the one type of cholesterol that is believed to be protective against coronary heart disease; having diabetes; having a history of stroke or blood vessel clots in the legs or feet; and being severely obese (more than 30 percent overweight).

Futher cholesterol analysis to determine the levels of LDL-cholesterol, a form of cholesterol associated with artery-clogging plaques, is recommended for (1) borderline-high-cholesterol patients who actually have coronary heart disease or two additional coronary heart disease risk factors and (2) all high-cholesterol patients.

According to the panel, a cholesterol-lowering program should be prescribed for patients in the two above groups if they have either (1) confirmed LDL-cholesterol levels of 130 mg/dl or above and coronary heart disease or two risk factors or (2) LDL-cholesterol of 160 mg/dl or above.

Treatment begins with diet therapy. For three months, patients try the "Step-One Diet," which restricts intake of fat, particularly the saturated fatty acids found in meats, dairy products and three plant oils (palm oil, palm kern oil and coconut oil). If LDL-cholesterol does not fall sufficiently, patients are to begin a more restrictive "Step-Two Diet." If a total of six months of diet therapy fails, drug therapy is to be added.

The drugs of first choice were determined by the National Cholesterol Education Program Adult Treatment Panel using two criteria: long-term safety and proven effectiveness in reducing coronary heart disease risk. The first-choice drugs are colestipol (Colestid, Upjohn) and cholestyramine (Questran, Mead Johnson) — both of which are swallowed, but not absorbed by the body, and which remove cholesterol as they pass through the gastrointestinal tract and are excreted — and nicotinic acid (vitamin B). Various drugs to reduce cholesterol have been used effectively in combination, an option the panel says may be useful for patients whose cholesterol levels do not respond adequately to single-drug therapy. Therapy is likely to be needed for a lifetime.

"Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults," National Cholesterol Education Program, National Heart, Lung, and Blood Institute, National Institutes of Health, Oct. 5, 1987.

ANXIETY: IS IT A CONDITION TO BE WORRIED ABOUT?

By Jack Gorman, M.D.
Associate Professor of Clinical Psychiatry
College of Physicians and Surgeons
Columbia University
New York, N.Y.

Is anxiety something to be anxious about? If it signals an anxiety disorder, the answer, according to the latest medical research, is a resounding "yes."

Anxiety is one of the most common of all emotions. The man who wrote "Uneasy lies the head that wears the crown" could just as easily have been talking about paupers as kings.

In general usage, anxiety denotes a state of painful uneasiness respecting an impending or anticipated ill. Its medical definition is, of course, more precise: "A pathologic condition occurring in nervous or mental disease as a state of restlessness or agitation with a distressing sense of oppression to the heart."

The latter describes the *anxiety disorders,* by far the most common of the mental illnesses, affecting 13.1 million Americans — one in 12 adults.

One of the anxiety disorders, *panic disorder,* is quite possibly caused by or related to a biochemical abnormality, although this has yet to be proved. It is characterized by brief episodes of intense apprehension or fear, during which the victim experiences at least four of the following symptoms: rapid breathing, palpitations, chest pain, weakness, choking, dizziness, feelings of unreality, hot and cold flashes, sweating, faintness, trembling, or fear of dying or doing something uncontrolled during an attack.

Untreated panic disorder may ultimately escalate to *agoraphobia with panic attacks,* a condition in which the victim avoids public settings, fearing that a panic attack may strike in such environments.

Other phobias are also categorized as anxiety disorders. *Simple phobia* is the irrational fear of specific objects or places (such as fear of snakes or of heights). And *social phobia* is fear of situations in which the victim is subjected to the scrutiny of others — speaking or eating in public, for example. The relationship of these phobias to panic disorder is unclear.

If a continually apprehensive individual doesn't have panic attacks, phobias or *obsessive-compulsive disorder* (recurrent disturbing thoughts or ritualized behavior performed to reduce anxiety), he or she may be a victim of *generalized anxiety disorder.* Its symptoms include persistent anticipation of misfortune, jitteriness, inability to relax, insomnia, difficulty concentrating and such physical signs of tension as sweating, heart racing, clammy hands and upset stomach.

Both Patients and Doctors Can Be Mislead

One major problem is that the anxiety-ridden patient tends to go to the doctor with generalized, ill-defined symptoms that can easily lead to misdiagnosis and improper treatment. The frightening fact is that an estimated three out of four patients with anxiety disorders are *never* properly diagnosed or treated.

Panic disorder, for example, is frequently mistaken for a cardiac or digestive problem. In a study at the University of Washington in Seattle, 89 percent of panic disorder patients originally complained of one or two physical problems —and the misdiagnoses of those complaints were often continued for months and even years.

How the Body Responds to Anxiety

Some anxiety can, of course, be the result of stress, either real or imagined. Physicians in general practice estimate that between half and three-quarters of all their patients come seeking relief from stress-related symptoms. The President's Commission on Mental Health, in fact, found that one of every four Americans is suffering "severe emotional stress" although no diagnosable physical illness is evident.

But anxiety disorders may sometimes have a biological basis. A growing body of evidence points to biochemical abnormalities in the brain, possibly inherited ones. Anxiety often triggers an outflow of adrenaline from the adrenal gland and the release of similar substances in the brain. These chemicals, in turn, stimulate the heart, blood pressure, muscles and respiratory system. At the same time, they activate the liver and

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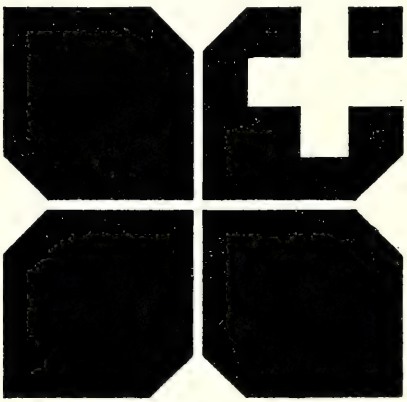

CHARLESTON, S.C.
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ANXIETY

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spleen, but inactivate other organs — such as the digestive system. The result is sharpened senses, muscular tension, heavy breathing and increased heart rate — all symptoms of anxiety.

When left untreated, anxiety disorders may lead to or aggravate physical symptoms. Some studies have shown, for instance, that irregular heartbeat, chest pain, dizziness, and even sudden cardiac death can be linked to anxiety.

Various other complications are associated with anxiety disorders. The rate of depression among anxiety patients appears exceedingly high, for example, though no direct connection between the conditions has been proved. The suicide rate among patients with anxiety appears to be higher than in the general population. And a study at the University of Iowa has found an excessive number of deaths from unnatural causes among panic-disorder patients.

When Old-Fashioned Remedies Fail, Treatment Becomes a Must

Relaxation techniques such as meditating, taking a warm bath or exercising may help dispel mild feelings of anxiety. In cases of hyperventilation, some doctors say the old folk-medicine remedy of breathing into a paper bag can actually relieve the heavy breathing and feeling of lightheadedness that patients experience.

Alcohol is no help in the long run. In fact, habitually relieving anxiety with alcohol can lead to alcohol abuse. A study at Rutgers Medical School in New Jersey found that more than a fifth of patients admitted for alcohol detoxification met the American Psychiatric Association's criteria for one or more anxiety disorders.

Counseling by friends, relatives or physicians can often ease feelings of anxiety, but when symptoms are troubling enough to be classified as an anxiety disorder, professional help becomes essential. Psychotherapy or anti-anxiety agents are effective in many cases, and a combination of the two is generally regarded as the best approach, particularly for panic disorder.

In the past 10 years, the most widely used medications for controlling anxiety have been the benzodiazepines. Currently there are nearly a score of them on the market. One of them, alprazolam (Xanax, Upjohn), has also shown promise in clinical trials against panic disorder and is being studied for antidepressant activity.

A major advantage of the benzodiazepines is the fact that they're among the safest medications used in psychiatry. There is little danger that the anxiety-ridden patient could take a lethal dose trying to ease his state of mind quickly. Even overt suicide attempts with benzodiazepines rarely succeed — unless alcohol or other drugs are also involved. By contrast, the antidepressants are often used in successful suicide attempts.

The point is that anxiety in its more severe forms can and should be treated, because there are now ways to relieve it that are generally both safe and effective.

The Bottom Line

The cost of untreated anxiety in lost work production, diminished social opportunities, impaired life styles and strain on the health care system is too high to be ignored, either by society or by the individual.

Until recent years, for example, panic disorder and agoraphobia were largely undiagnosed and untreated. Though this is but one species of anxiety, it's clearly a major one. The National Institute of Mental Health estimates that 1.1 million Americans are treated for it each year. Untreated victims often turn to alcohol for relief. Their rate of mortality is significantly higher.

A study being conducted by Douglas M. McNair, Ph.D., professor of psychology and director of the clinical psychopharmacology laboratory at Boston University, is aimed at measuring the cost to society of untreated panic disorder. Dr. McNair's figures are expected to drive home in a dramatic way the destructive effect of this anxiety disorder on our pocketbooks and on our lives.

The most recent American Psychiatric Association figures (from 1984) indicate that between 15 and 18 percent of the population (between 31 and 41 million Americans) suffer from a clearly diagnosable mental disorder that interferes with employment, school attendance or independent living. (The National Institute of Mental Health estimates run higher — at 19 percent.) Direct and indirect costs to American society, according to a 1983 study, total a staggering $218 billion annually.

The cost can be measured in other ways, such as evaluating the "potentially productive years of life lost." For example, accidents (25 to 50 percent of which are attributable to alcohol

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UNC SCHOOL OF PHARMACY RECEIVES GRANT FROM MERCK, SHARP AND DOHME

*****NOTE***Pictured are, from left to right: Jenny McDaniel, Senior Professional Representative, Merck, Sharp and Dohme; Kathy Havel, District Manager; Fred Eckel, Professor and Chariman, Division of Pharmacy Practice; Jo Creel German, Senior Professional Representative; Anthony C. Zecca, District Manager.**

The School of Pharmacy at the University of North Carolina at Chapel Hill has received a $16,000 grant from the Merck Foundation, part of Merck, Sharp and Dohme, Inc., to support the development of a Pharmacy Executive Program designed to help practicing hospital pharmacists better manage their departments.

The program is planned for late 1988. Applications of Management Science geared specifically towards hospital pharmacists will be one part of the program.

The Hospital Pharmacy Executive Institute is designed for hospital pharmacy directors and assistant directors. The 25 pilot program participants will be selected for their expected ability to change the future of hospital pharmacy practice.

The program will be under the leadership of Fred Eckel, Professor of Hospital Pharmacy and Chairman of Pharmacy Practice, and John Mackowiak, Assistant Professor of Pharmacy Administration.

ANXIETY

continued from page 27

abuse) are the fourth leading cause of death in the United States, but they rank first in the loss of productive years due to premature death.

Another cost consideration is that individuals with substance abuse and mental problems significantly drain general health care resources. The cost of their health care is twice that of people without such problems.

The bottom line is that the cost of anxiety and related disorders is very high and largely avoidable. We simply can't afford to leave them untreated or undertreated.

Additional Readings

1. Breier, Alan, et al. "The Diagnostic Validity of Anxiety Disorders and Their Relationship to Depressive Illness." *American Journal of Psychiatry,* (July 1985) pp. 787–794.
2. Weiss, Kenneth, and Rosenberg, David. "Prevalence of Anxiety Disorder Among Alcoholics." *Journal of Clinical Psychiatry,* (1985) pp. 3–4.
3. Katon, Wayne. "Panic Disorder and Somatization." *American Journal of Medicine,* (July 1984) pp. 101–105.
4. Coryell, William, et al. "Excess Mortality in Panic Disorder." *Archives of General Psychiatry,* (June 1982) pp. 701–703.
5. Bodanoff, M. "Stress." *Physicians' Manual for Patients,* (1984) pp. 385–397.

LIGHTING AS A MERCHANDISING TOOL

by Warren Spear, R.Ph.

We are creatures of light. We wake up with light. We shorten our day when there is less daytime. We are affected in many ways by light. All too often we fail to use light to our advantage as a merchandising tool.

What Messages Do You Send To Your Customer With Your Lighting?

An even, high intensity of a single color light tells the customer that he or she is looking at a commodity retailer. This is the type of lighting generally used by chains in an attempt to **convey a low price image.** Conversely, lowered total foot candles with the use of spot or flood incandescent lights can provide **varying light intensities give the customer the message of specialty items and higher perceived value.** Note the next time you are in a well planned jewelry store or fine specialty shop that track lighting with spots are used to create shadows and emphasize texture. We can use these concepts in community pharmacy. Use track lighting with incandescent spot and/or flood lights to **present** special **products to your customer.** Light can give greater emphasis to gift displays and feature ends. The checkout (where we have our last opportunity sell impulse items) should also have special lighting. Next we find that people are attracted to light. We use this to advantage to bring people into our store. Sidewalks and entry ways should get special care in regard to lighting. Increase light intensity as you get to the entry with greater light inside to **make your store more inviting.** The light people recommend changing all lamps at the same time. A store with many burned out lamps can look shoddy. This shoddy look can occur when individual lamps are changed on an "as need" basis. Most fluorescent lights can do strange things to the colors we see. For true colors consider cool white deluxe (CWX) lamps white provide excellent color rendition simulating a cloudy day, C50 lamps which simulate a partly cloudy day or C75 lamps which simulate north sky light.

Good lighting makes good sense because it helps to put more dollars in the till.

BIRTHS

Janice McKinne Davis (UNC School of Pharmacy '80) and husband Bill Davis of Cooper City, Florida, announce the birth of their daughter, Brooke Peterson. Brooke was born on February 12, 1988, weighed 7lbs. 7oz. and was 18½ inches long.

Janice and Bill also have a son, Kevin.

Jana Durham Andrews and *John L. Andrews, III,* of Trinity, announce the birth of their daughter, Kelly John, on February 6, 1988. Both Jana and John are 1982 graduates of the UNC School of Pharmacy.

DEATHS

LEONARD H. CRUMPLER

Leonard H. Crumpler, Raleigh, died Monday, August 17, 1987 at the age of 79. A native of Roseboro, Crumpler was first registered in North Carolina in 1934 and was inducted into the Fifty Plus Club of the NCPhA in 1984. He had worked as an inspector with the NC Board of Pharmacy, a representative with Sharp & Dohme and E.R. Squibb, and operated Five Points Pharmacy and Longview Pharmacies in Raleigh. He also was a part-owner of Professional Professional Pharmacy in Raleigh.

JAMES I. PEILE, JR.

James I. "Buddy" Peile, Jr., Valdese, died Saturday, January 23, 1988 at his home. He was 56 years old. Peile was co-owner of Rock Drug Store and was a 1958 graduate of the UNC School of Pharmacy.

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PROFESSIONAL PHARMACIES: Several small prescription-oriented pharmacies are currently available for individual ownership in North Carolina. These opportunities provide the vehicle to practice pharmacy the way you were taught, while offering an attractive income and more time to be with your family. In some of these cases, financing is also available to qualified candidates. For more information write: Jan Patrick, 10121 Paget Dr., St. Louis MO 63132.

How much is a pharmacy really worth? Buyers, sellers, estate and financial planners need to know more than the numbers "on the books". Professional evaluation services available as well as full service representation for buyers and sellers. Get the most for your money and your business. Contact Alan Senter, pharmacy specialist, VR Business Brokers, 3717 National Drive, Suite 208, Raleigh NC 27612. Call: (919) 787-2945

The Department of Pharmacy Services at Sampson County Memorial Hospital has opportunities available for hospital pharmacy practice. This 145 bed JCAH approved hospital is located within 1 hour drive of the coast. Good working conditions with Nursing and Medical Staff. Excellent starting salary, plus comprehensive benefit package. Activities include complete computerization, unit dose, IV admixture, patient profile and inventory control. Patient care services include: antibiotic monitoring, TPN, Aminoglycoside dosing and support for continuing education. Contact: Patricia Britt, director, Personnel or Jenny Strickland, Director Pharmacy at (919) 592-8511.

Fixtures Available after January 31. Complete store fixtures for a 5,000 square foot store in excellent condition including wall, gondolas, end pieces, one or more glass showcases and Rx department. Contact Hamp Langdon, Kernersville at 919 993-2195.

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CLASSIFIEDS

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NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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PHARMACISTS WANTED: Greensboro and Greensboro market area. Contact David Cox, Revco Drug Stores, at (919) 766-6252.

FOR SALE: Drug store for sale in Eastern North Carolina. 30 miles from the ocean. Small town with only one store. 8 miles to the nearest competitor. 1987 sales $306,915.00 and growing. Bullock & Whaley, P.O. Box 3764, Wilmington, NC 28406. (919) 762-2868.

STAFF PHARMACISTS needed for retail grocery chain in Elizabeth City, Rocky Mount and Goldsboro, NC. Pharmacy degree required. Salary ranges from 37K (40 hour week), comprehensive benefit package. Moving expenses covered by client. Call Marybeth Gaiani (704) 529-1940.

ANTIQUE STORE FIXTURES for sale. Includes display cases, soda fountain, wall fixtures. Contact Charles Chapman at (704) 933-7775.

PATIENT CARE PHARMACIST: Winston—Salem Health Care Plan, Inc. pharmacy has a full-time patient-care pharmacy positon available. This position provides the opportunity to practice pharmacy in an ideal professioanl setting. Phamacists provide drug information to patients and clinical staff, screen for drug allergies and food/drug interactions, dispense on line, participate in inservice programs and supervise technicians and state-of-the-art automation-computerization designed inhouse in this modern, newly built facility. Excellent schedule and competitive salary and benefits. Interested applicants should contact Personnel at (919) 768-4730 or Personnel Director at (919) 768-3384, Winston-Salem Health Care Plan, Inc., 250 Charlois Boulevard, Winston-Salem, NC 27103.

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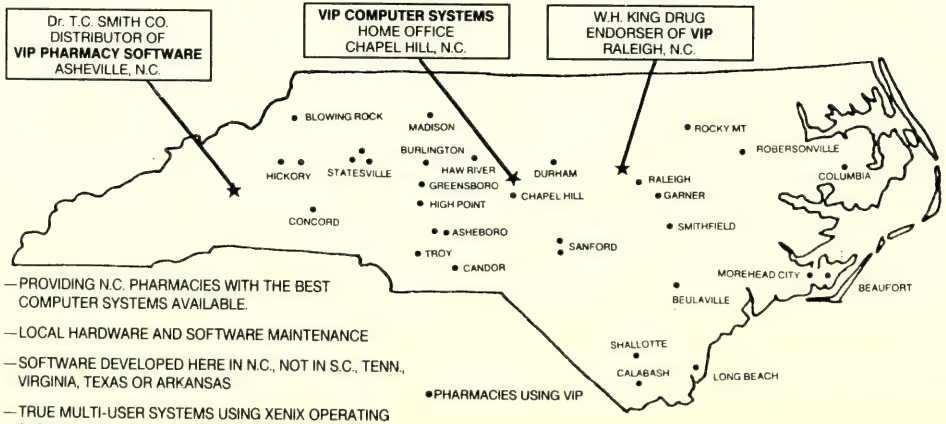

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1988 ANNUAL CONVENTION
NORTH CAROLINA PHARMACEUTICAL ASSOCIATION
WOMAN'S AUXILIARY AND TRAVELING MEMBERS' AUXILIARY
ASHEVILLE, MAY 18 THROUGH MAY 21

Convention in Brief

Wednesday

9:00 a.m. to 4:30 p.m. — Joint Management Seminar — Featuring Terry Paulson, Ph.D. Sponsored by the NC Pharmaceutical Association, & NC Society of Hospital Pharmacists through an **educational grant from Smith Kline & French**

6:00 p.m. to 7:00 p.m. — Presidents' Reception honoring Presidents of NCPhA, Woman's Auxiliary & T.M.A. **Sponsored by Revco Drug Company**

7:30 p.m. to 10:30 p.m. — Opening Session Banquet. Presentation of NCPhA awards with Jeanne Robertson as featured speaker.*

Thursday

7:00 a.m. — Woman's Auxiliary Walk-A-Thon

7:30 a.m. — T.M.A. Foundation Breakfast

9:00 a.m. — NCPhA First Business Session

9:30 a.m. — Bus Tour to Biltmore House, Luncheon at Deerpark Rest. and Tour of Winery **Sponsored in part by Burroughs Wellcome Co.**

10:00 a.m. — T.M.A. Business Session

12:30 p.m. — P.I. Luncheon

Afternoon — Golf and Tennis Tournaments **Tennis provided by Jefferson Pilot, Golf Sponsored by Owens Illinois, Carts by Burroughs Wellcome Co., Refreshments by Justice Drug Division**

1:00 to 3:00 p.m. — Workshop on Legislation, sponsored by Women in Pharmacy Committee

3:00 to 5:00 p.m. — Consulting Pharmacists Workshop

9:00 p.m. to Midnight — T.M.A. Dance with Paul Nichols' Orchestra **Sponsored by the Traveling Members' Auxiliary**

Friday

7:30 a.m. — PharmPAC Breakfast (Everyone is welcome)*

8:30 a.m. — Woman's Auxiliary Coffee in Hospitality Room

9:00 a.m. — Second NCPhA Business Session

9:30 a.m. — Woman's Auxiliary Business Session

12:30 p.m. — Woman's Auxiliary Luncheon, Fashion Show and Installation of Officers, at the Country Club of Asheville **Sponsored by Glaxo Inc.**

1:00 p.m. — Exhibit Hall opens

1:00 p.m. — Complimentary Buffet Luncheon in Exhibit Hall

6:00 p.m. — Mountain Party (Outdoor cooking, square dancing, bar-b-que, live band and cloggers at the Taylor Ranch) **Sponsored in part by Glaxo Inc.***

Saturday

7:30 a.m. — Christian Pharmacists Breakfast*

9:00 a.m. — Third NCPhA Business Session

12:30 p.m. — Recognition Luncheon and Installation of Officers*

*Reservations for these activities may be purchased through NCPhA office

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION
108 ANNUAL CONVENTION
MAY 18 — 21, 1988

Wednesday

9:00 a.m. to 4:30 p.m. — NCPhA-NCSHP Joint Management Seminar

6:00 p.m. to 7:00 p.m. — President's Reception honoring Presidents of NCPhA, Woman's Auxiliary & T.M.A. **Sponsored by Revco, D.S. Inc.**

7:30 p.m. to 10:30 p.m. — Opening Session Banquet — Phillip F. Crouch, Master of Ceremonies Presentation of NCPhA awards with Jeanne Robertson as featured speaker.*

Thursday

9:00 a.m. — NCPhA First Business Session — Albert F. Lockamy, 1st Vice President, presiding

12:30 p.m. — P.I. Luncheon

Afternoon — Golf and Tennis Tournaments **Tennis provided by Jefferson Pilot, Golf Sponsored by Owens Illinois, Carts by Burroughs Wellcome Co., Refreshments by Justice Drug Division**

1:00 to 3:00 p.m. — Workshop on Legislation, sponsored by Women in Pharmacy Committee

3:00 to 5:00 p.m. — Consulting Pharmacists Workshop

9:00 p.m. to Midnight — T.M.A. Dance with Paul Nichols' Orchestra **Sponsored by the Traveling Members' Auxiliary**

Note: Patient counselling workshop with video instruction. Continuous from 10:00 a.m. to 4:00 p.m. John I. Mackowiak and Thomas H. Wiser, Advisors

Friday

7:30 a.m. — PharmPAC Breakfast (Everyone is welcome)*

9:00 a.m. — Second NCPhA Business Session — W. Robert Bizzell, 2nd Vice President presiding

1:00 p.m. — Exhibit Hall opens

1:00 p.m. — Complimentary Buffet Luncheon in Exhibit Hall

6:00 p.m. — Mountain Party (Outdoor cooking, square dancing, bar-b-que, live band and cloggers at the Taylor Ranch) **Sponsored in part by Glaxo Inc.***

Saturday

7:30 a.m. — Christian Pharmacists Breakfast*

9:00 a.m. — Third NCPhA Business Session — Julian E. Upchurch, President, presiding

12:30 p.m. — Recognition Luncheon* Installation of Officers by W. Artemus West, Past President

*Reservations for these activities may be purchased through NCPhA office

All convention registrants are invited to NCPhA Business Sessions

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WOMAN'S AUXILIARY
61ST ANNUAL CONVENTION

Wednesday

6:00 p.m. to 7:00 p.m. — President's Reception honoring Presidents of NCPhA, Woman's Auxiliary & T.M.A. **Sponsored by Revco, D.S. Inc.**

7:30 p.m. to 10:30 p.m. — Opening Session Banquet — Phillip F. Crouch, Master of Ceremonies Presentation of NCPhA awards with Jeanne Robertson as featured speaker.*

Thursday

7:00 a.m. — Woman's Auxiliary Walk-A-Thon

9:30 a.m. — Bus Tour to Biltmore House, Luncheon at Deerpark Rest. and Tour of Winery **Sponsored in part by Burroughs Wellcome, Co.**

Afternoon — Golf and Tennis Tournaments **Tennis provided by Jefferson Pilot, Golf Sponsored by Owens Illinois, Carts by Burroughs Wellcome Co., Refreshments by Justice Drug Division**

9:00 p.m. — T.M.A. Dance with Paul Nichols' Orchestra **Sponsored by the Traveling Members' Auxiliary**

Friday

8:30 a.m. — Woman's Auxiliary Coffee in Hospitality Room

9:30 a.m. — Woman's Auxiliary Business Session

12:30 p.m. — Woman's Auxiliary Luncheon, Fashion Show and Installation of Officers, at the Country Club of Asheville **Sponsored by Glaxo Inc.**

6:00 p.m. — Mountain Party (Outdoor cooking, square dancing, bar-b-que, live band and cloggers at the Taylor Ranch) **Sponsored in part by Glaxo Inc.***

Saturday

12:30 p.m. — Recognition Luncheon and Installation of NCPhA Officers

TRAVELING MEMBERS' AUXILIARY
74TH ANNUAL CONVENTION

Wednesday

6:00 p.m. to 7:00 p.m. — President's Reception honoring Presidents of NCPhA, Woman's Auxiliary & T.M.A. **Sponsored by Revco, D.S. Inc.**

7:30 p.m. to 10:30 p.m. — Opening Session Banquet — Phillip F. Crouch, Master of Ceremonies Presentation of NCPhA awards with Jeanne Robertson as featured speaker.*

Thursday

7:30 a.m. — T.M.A. Foundation Breakfast

10:00 a.m. — T.M.A. Business Session

Afternoon — Golf and Tennis Tournaments **Tennis provided by Jefferson Pilot, Golf Sponsored by Owens Illinois, Carts by Burroughs Wellcome Co., Refreshments by Justice Drug Division**

9:00 p.m. — T.M.A. Dance with Paul Nichols' Orchestra **Sponsored by the Traveling Members' Auxiliary**

Friday

7:30 a.m. — PharmPAC Breakfast (Everyone is welcome)*

1:00 p.m. — Exhibit Hall opens

1:00 p.m. — Complimentary Buffet Luncheon in Exhibit Hall

6:00 p.m. — Mountain Party (Outdoor cooking, square dancing, bar-b-que, live band and cloggers at the Taylor Ranch) **Sponsored in part by Glaxo Inc.***

Saturday

12:30 p.m. — Recognition Luncheon and Installation of Officers*

*Reservations for these activities may be purchased through NCPhA office

HEALTH PROMOTION AND THE ACTIVATED CLIENT

Today's leading killers are no longer infectious and communicable diseases. Gains against these once great health problems have come about as the result of improvements in immunizations, antibiotics, sanitation, housing, and nutrition. Today's leading killers are chronic diseases and other preventable conditions such as accidental injuries. These causes of death and disability can best be addressed by efforts designed to prevent disease and promote health.

The United States is in the midst of a renewed commitment to healthier lifestyles, as depicted by the "fitness craze" of today's joggers, runners, aerobicizers, and dieters. Also out of this era of renewed commitment is evolving a new personality of client for health professionals, The Activated Client.[1] The activated client includes an ever-growing breed of people who want more information about their health and who are taking more control over determining their health outcomes. The possibility of positive health is increased for activated clients when pharmacists and other health care professionals assist them as members of their "activation team" by giving information, being supportive, and acting as a referral source.

It is estimated that one-half of all premature deaths (deaths between ages 18-65 years) are related to life-style behaviors. North Carolina has excessive mortality rates, exceeding the United States mortality rates in heart disease by 8%, stroke by 27%, kidney disease by 31%, accidents by 15%, suicides by 8%, and lung cancer by 26%. The mortality from these conditions can be prevented by alleviating or reducing the risk factors, or behaviors associated with them. The bottom line of promoting health is long term behavior change. Behaviors that influence health include smoking, overeating, lack of exercise, excessive stress, lack of seatbelt use, and alcohol and drug abuse.

We all know that certain behaviors are very important to people, and in many cases difficult to change. Knowledge of why a behavior may be detrimental to health is seldom enough. People require constant positive reinforcement to be able to change to a healthy "habit" or from an unhealthy one. Consider, for a moment, a healthy behavior you have tried to change. Maybe you were successful, maybe you were not. What influenced you to change? Many things can, such as a friend who asked you take up jogging, or a spouse or family member who assisted you in making healthier food choices, or the corner drug store that "just happened" to be checking blood pressure readings.

The point is that there are several factors that affect people's outcome of success in behavior change. One factor is that the source of the information must be credible. In addition to knowledge from a credible source of what the problem is, and why it is important to change, people must also have a continuous source of support from either friends, family, coworker, or health professional. The environment is another key factor in adopting a healthy behavior. Circumstances that reinforce positive behavior in the home and community can be a powerful influence in making the decision to change or maintain helathy behaviors. It may take multiple interventions or a combination of these activities to bring about and maintain a desirable change.

Now just what does all this have to do with what we call the activated client, much less pharmacists? Keith W. Sehnert, M.D., in *How to be Your Own Doctor (Sometimes),* describes the activated client as "a kind of hearty hybrid who is three quarters patient and one quarter physician."[2] These activated clients have black bags of their own, and check their youngster's ears with otoscopes and their neighbor's blood pressures with stethoscopes and sphygmomanometers. They no longer passively sit and wait until illness symptoms strike, but actively pursue a state of good health. They strive to live better longer. And they are playing an important role in the health partnership with their physician, pharmacist, and family. They are taking the lead in controlling their own health.

These activated clients are using pharmacies and drug stores on an increased basis and as most people, they consider the neighborhood pharmacist a mighty good person to go to for advice. He volunteers information about how to take medication, and the side effects of medication. He's on the front lines, and can also give information about over the counter drugs. People usually feel comfortable asking the pharmacist questions about subjects that are not "on the label" and have not previously been addressed, such as "can I take this with juice instead of water? Can I take it before my meal? Do I have to get up every four hours at night to take this?" Pharmacists are a very credible source of information, and thus should expand their role

on the "activation team" in promoting good health.

Pharmacists have many opportunities to positively promote health with their clients, especially clients who may be at higher risk, due to the synergistic effect of multiple risk factors. Many of these opportunities occur in relation to a certain type of drug being dispensed. For example, approximately 8 to 10 million women use oral contraceptives as their preferred method of birth control. According to the American Cancer Society in the *Proceedings of International Conference on Smoking Cessation,* 30 to 40 percent of women who use oral contraceptives also smoke regularly. That means that approximately 4 million American women smoke and use oral contraceptives. The Food and Drug Administration has required patient information inserts that state cigarette smoking increases the risk of serious adverse effects on the heart and blood vessels from oral contraceptive use. The inserts also state that risk increases with age and heavy smoking, and that women who use oral contraceptives should not smoke. Many of these women have their prescriptions filled once a month by a pharmacist. This gives the pharmacists an opportunity to participate on the activation team in several ways.

In the level of least involvement, the pharmacist can simply *model* nonsmoking behavior, and discourage smoking in the pharmacy or drug store. In the next level of involvement, the pharmacist can provide *written information* on the health risks of smoking. The information can be general, or tailored to fit particular characteristics of clients. The third level of involvement combines the written information with a *personal message* encouraging the client to stop smoking. As privately as possible, the pharmacist can share a firm, supportive quit smoking message that encourages the client to stop smoking by emphasizing the potential benefits as well as the hazards, and by helping the client to identify sources of support in changing the behavior. This level of involvement includes helping the client make a commitment to quit smoking, and referring the client to the appropriate resources. Patients who have been referred to smoking control programs can be asked about their progress and given additional encouragement in later contacts. The highest level of involvement includes the written information and personal message, but in this level of involvement the pharmacist refers the client to a smoking control program held within the pharmacy or sponsored by the pharmacy.

Pharmacists have the same opportunity to approach clients concerning smoking behavior when dispensing medication to hypertensives and pregnant women. Smoking and hypertension are two major risk factors for cardiovascular disease. Results from the Framingham study show that 40-year-old males who smoked and had elevated blood pressures were three and one half times more likely to develop cardiovascular disease than males without these risks.[3] Pregnant women are also a high risk target group. Most women who smoke continue to do so throughout pregnancy, with only one third stopping on thier own in response to health warnings or because of taste aversion or other natural unpleasant reactions (nausea or vomitting.)[4] Cigarette smoking during pregnancy is associated with low infant birth weights, spontaneous abortions, and still births; however, these risks can be almost eliminated if smoking cessation occurs within the first trimester.[5] Pharmacists have the opportunity to deliver supportive health messages to both hypertensives and pregnant women on many occasions.

As part of the Activated Client's health care team, pharmacists have tremendous potential to contribute positively to the health promotion

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HEALTH PROMOTION

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movement. Already viewed as a credible source of information, pharmacists can expand their health care provider role by becoming active in providing health information and referral advice to their clients. A good way to begin is to pick a risk behavior, such as cigarette smoking, dietary habits, lack of exercise, or lack of seatbelt usage. Then find out if there are certain groups of people who may be at higher risk from the effects of the behavior chosen (such as pregnant women or teenagers). Decide what level of involvement will be undertaken. Will written information be given only, or will classes on the topic be established or sponsored? Gather all the necessary information needed to give clients, especially information on referral sources, and begin.

Promising opportunities await the innovative health care provider who wishes to participate in the activated client-centered network. Clients who care so much about their helath will appreciate the efforts of a health care provider who also cares. The appreciation may result in continued business from the client and professional satisfaction for the pharmacist.

REFERENCES

[1]Sehnert, Keith. *How to be Your Own Doctor (Sometimes)* (New York: Grosset & Dunlap) p.3, 1981.

[2]Sehnert, Keith. *How to be Your Own Doctor (Sometimes)* (New York: Grosset & Dunlap) p.3, 1981.

[3]Schoenberger, James A. *Physician's Guide, How to Help Your Hypertensive Patients Stop Smoking,* National High Blood Pressure Education Program, p. 1., Publication No. 83-1271.

[4]Schwartz, Jerome L. *Progress in Smoking Cessation* (Proceedings of the International Conference on Smoking Cessation, American Cancer Society), p. 321, 1978.

[5]Schwartz, Jerome L. *Progress in Smoking Cessation* (Proceedings of the International Conference on Smoking Cessation, American Cancer Society), p. 321, 1978.

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THE TWO WORLDS OF COMMUNITY PHARMACY

by Warren Spear, R.Ph.

The Profession

Pharmacy is a serious profession. In some instances it is a matter of life and death. The services we provide go far beyond that of any other retailer. The professional aspect of pharmacy is what sets it apart from all other retail operations. Making the distinction between professional aspects and the business side of a retail operation is important.

Retailing

Retailing is frivolous and fun. It is P.T. Barnum and the Easter Bunny. It is sensing the latest trends and fads. It is pure capitalism. It is the constant search for more different and effective ways to show, display and sell more merchandise. It is ever changing and exciting.

Two Worlds

In community pharmacy we must live in these two worlds. Our academic training has prepared us for the former. The reality of business forces us to cope with the latter. Most of us find merchandising rewarding. Unfortunately, as pharmacists we cannot devote the time necessary to properly manage our front store. When there is a choice between merchandising and the professional aspect of pharmacy, merchandising suffers. Today's competition is far more sophisticated than it was just a few short years ago. The growth of the chain stores and the explosion of shopping malls has placed greater emphasis on merchandising innovation. This is our competition.

The Front Store Manager

Many pharmacists, especially those with chain store experience, have determined that it is more efficient and cost effective to have a retail front store manager. A front store manager can devote the time, energy and thought required to keep the front store working for you.

This person can ferret out a merchandising blend that is right for your location. He or she can find and research supply resources. Locating product, displaying and signage can all be the responsibility of the front store manager. Some of our colleagues who effectively employ front store managers include: Joe Edwards, Edwards Pharmacy, Raleigh, Bill Brown, President of Hollowells in Greenville, Mickey Whitehead of Mutual Discount Drugs of Ramseur and Steve Detter and Phil Minton who operate Crescent Drug in Graham. I am sure any of these people would be pleased to have you visit or call to discuss this valuable management tool.

WEARING RUNNING SHOES CAN REDUCE SERIOUS DIABETIC FOOT PROBLEMS

People with diabetes are very likely to suffer from foot problems because of diminished blood flow to and loss of sensation in their feet. Many diabetes-related amputations are the result of ulcerated, infected and gangrenous calluses on the soles of the feet caused by abnormal pressure or friction.

Recent studies have shown that wearing properly fitted running shoes can help diabetic people avoid this common affliction.

Running shoes can indeed be an excellent form of footwear for people with diabetes and peripheral neuropathy (nerve damage to the hands and feet), stated Daniel Lorber, M.D., of the Diabetes Care and Information Center, Flushing, N.Y.

According to Dr. Lorber, running shoes can help because they are light-weight, offer good cushioning and arch support, are soft and thus not difficult to break in — there by eliminating the possibility of blisters — and more ventilated. Ventilation reduces moisture where fungus and bacteria can thrive. A fungus such as athlete's foot poses a problem because it breaks the skin, which is a primary barrier against infection, he said.

"Running Shoes May Prevent Foot Amputations in Diabetic Patients," Journal of Pharmacy Technology, May/June 1987, p. 123; Interview with Daniel Lorber, M.D., Diabetes Care and Information Center, Flushing, N.Y., and Department of Clinical Medicine, Albert Einstein College of Medicine, New York, July 22, 1987.

SCENES FROM THE ANNUAL PHARMACY LEADERS FORUM

PHARMACY LEADERS FORUM

North Carolina pharmacy leaders met in Southern Pines, February 6 and 7, 1988, to discuss issues affecting the profession.

On February 6 and 7, 1988, thirty-two individuals representing ten organized pharmacy groups in NC met at the Fourth Annual Pharmacy Leaders Forum. Coordinated by the North Carolina Board of Pharmacy since 1985, the Forum attracted representatives from the state's two schools of pharmacy, pharmaceutical wholesalers, manufacturers, and chain drug stores. North Carolina Pharmaceutical Association, North Carolina Society of Hospital Pharmacists and North Carolina Medical Assistance Program. Participants were invited for 1½ days of socializing and round-table discussions with an open agenda.

In the 1988 session, the state's pharmacy leaders shared their views on controversial topics such as physician dispensing legislation, mandatory continuing education programs, training and regulation of pharmacy technicians, all PharmD programs and extramural degrees, catastrophic health care legislation and "wet lab" examinations. They also heard updates on current legislative issues and reports on the undergraduate, graduate, and continuing education programs of the Schools of Pharmacy at University of North Carolina and Campbell University.

The group's cooperative efforts were obvious in its support of the state's newly established Pharmacist Recovery Network (PRN), a program sponsored by NCSHP and NCPhA and chaired by Dennis E. Moore, which provides assistance to pharmacists with substance abuse problems. The goal of the PRN program, approved in August, 1986, is to offer assistance to impaired pharmacists for a period of 30 months after the primary interface. Currently seven pharmacists are receiving assistance from this volunteer program. Moore estimated that the problem of substance abuse afflicts about 350 pharmacists in North Carolina. He reported that approximately 80% of health care professionals can be successfully rehabilitated. The greatest asset that health care professionals have in achieving successful rehabilitation is the leverage of their professional licensing boards. Since the chance for successful recovery is also linked to employer support, the state's employer pharmacists should be encouraged to assist pharmacists in the rehabilitation process. In this process, continual dialogue between the pharmacist and the helping group is essential; intense supervision is also required. Moore warned that the suicide rate is especially high among pharmacists at the first mention of intervention. He encouraged employers to involve PRN very early to help them through this critical phase.

The need for more pharmacist-patient interaction was a recurring concept in the week-end discussions. A Task Force on Pharmacy (established by the Forum at its 1987 meeting), chaired by Dean Ronald W. Maddox, Campbell School of Pharmacy, commissioned Jean P. Gagnon, UNC School of Pharmacy, to study the perceptions of pharmacists held by consumers and physicians in North Carolina. According to this focus group study, conducted in the cities of Raleigh, Greensboro, and Fayetteville, consumers regard pharmacists as "dependable, friendly, knowledgeable, accurate and overworked." Although consumers are generally pleased with the pharmacy services they receive, they want more drug information from pharmacists than they are getting. Consumers frequently expressed the desire for drug information pamphlets, 24-hour service, drug expiration date on the label, a comfortable waiting room, and a private counseling area. The physicians view pharmacists as "competent, ethical, accurate, and dependable." Regarding pharmacy services, physicians like the checks and balances that a pharmacist provides. They want the pharmacist to monitor drug interactions and to clarify dosage directions with patients. Physicians also want more drug information from the pharmacist.

Forum attendees did not favor the concept of mandatory patient counseling. Other ways to promote patient-pharmacist interaction were discussed, such as more continuing education programs on the subject; monetary and other incentives for pharmacists; reimbursement tactics; reassignment of technical functions; use of written, audiovisual and telecommunication materials; examining pharmacists' patient education skills for licensure; and promoting clinical pharmacy activities by various other means.

The topic of the future of clinical pharmacy in North Carolina prompted lively discussion at the Forum. A sentiment held by many was expressed by one participant. "The public doesn't criticize the pharmacist but does want more services. In organized pharmacy, we tend to focus on the cost of the *product*; perhaps our economic arguments are misdirected. Often consumers don't see a difference between pharmacies because there

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PHARMACY LEADERS

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aren't any differences in the products. If pharmacists take more time to counsel patients, a difference in pharmacy services will emerge. If greater public awareness is focused on the *service* provided by pharmacists, economic rewards for providing the services consumers want will logically follow."

At the conclusion of the Forum many attendees commented on the value of the conference as a learning and sharing experience; issues were discussed in depth and with congenial forthrightness. William H. Randall, Chairman of the NC Board of Pharmacy, closed the meeting with a charge to the participants, "Each of us has something we should do to follow up on the ideas that have been presented here. We have to act on these discussions in order to make progress."

Attending the Pharmacy Leaders Forum were: from the Board of Pharmacy; William R. Adams, Jr., Harold V. Day, W. Whitaker Moose, David R. Work, William H. Randall, Jr., Evelyn P. Lloyd, and Joseph R. Roberts, III. From the UNC School of Pharmacy; Tom S. Miya, Dean, George H. Cocolas, Associate Dean, Betty H. Dennis, A. Wayne Pittman, John I. Mackowiak. From Campbell University School of Pharmacy; Ronald W. Maddox, Dean, Daniel W. Teat, Thomas H. Wiser. From NCPhA; Julian E. Upchurch, Albert F. Lockamy, Jr., Ralph H. Ashworth, A. H. Mebane, III. From NCSHP; Fred M. Eckel, Pamela U. Joyner, Thomas F. Hughes, Bruce R. Canaday, Sandra H. Hak. From NC Drug Wholesalers; W. Keith Elmore — Bellamy Drugs, C. R. "Rusty" Hamrich-Kendall Drug Company. From pharmaceutical manufacturers; Josiah R. Whitehead — Burroughs Wellcome Co., William H. Edmondson — Glaxo Inc. Jimmy S. Jackson — Kerr Drug Company represented the chain drug industry and C. B. "Benny" Ridout, pharmacy consultant to the Division of Medical Assistance, NC Department of Human Resources, was also a participant.

by Sandra Hak

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CORRESPONDENCE COURSE

ADVISING CONSUMERS ON OTC MENSTRUAL PRODUCTS

by Thomas A. Gossel, R.Ph.,Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University
Ada, OH

and

J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati, OH

Goals

The goals of this lesson are to:

1. discuss the cause and treatment of primary dysmenorrhea and distinguish it from premenstrual syndrome;
2. present the recommendations of the FDA/OTC advisory panel that reviewed OTC menstrual product ingredients.

Objectives

At the conclusion of this lesson, the successful participant should be able to:

1. define dysmenorrhea and premenstrual syndrome, and differentiate between primary and secondary dysmenorrhea;
2. list four pharmacologic classes of drugs used to treat primary dysmenorrhea;
3. classify various ingredients of OTC menstrual products into appropriate FDA categories;
4. state specific patient advice to relate to consumers purchasing an OTC menstrual product.

Sometimes described as "the woman's curse," or "the cramps," dysmenorrhea is the most common cause of gynecological symptoms. It affects more than half of all fertile American women and is not well understood by health practitioners and consumers. Therapy is, therefore, largely empirical.

Throughout the years, a wide assortment of home remedies and proprietary products have been used to ease the symptoms of dysmenorrhea. Whereas the majority of these treatments have been based on subjective responses and anecdotal observation rather than objective reasoning, others have at least been based on theoretical value.

Recently, an FDA OTC advisory panel of medical experts reviewed over 70 active ingredients of OTC products purported to be beneficial in alleviating menstrual disorders. The recommendations of this advisory panel are summarized in this month's lesson. Additionally, current concepts advanced to explain a possible etiology of dysmenorrhea are examined. Dysmenorrhea is also differentiated from a separate, but frequently confused condition, premenstrual syndrome.

Background

"Dysmenorrhea" is derived from the Greek word that means painful or difficult menstrual flow. In fertile women, it is the major cause of loss of days from school or work. About 10 percent of affected women miss an average of 1 to 3 days each month.

There are two forms of dysmenorrhea. **Primary (spastic, intrinsic) dysmenorrhea** refers to the syndrome that exists in the absence of

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in the service of pharmacy

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CORRESPONDENCE COURSE

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pelvic pathology. It is the more common type, accounting for approximately 80 percent of all cases of menstrual pain.

Secondary (extrinsic, acquired) dysmenorrhea results as a consequence of an underlying organic disorder such as benign uterine tumors, endometriosis (inflammation of the uterine mucosa), or cancer. The presence of an intrauterine device (IUD) may cause secondary dysmenorrheal discomfort. The condition can be suspected whenever menstrual discomfort first appears after age 20. The pain of secondary dysmenorrhea normally begins several days before onset of menstruation. The pain is more constant than that with the primary form and continues throughout menstruation, perhaps even to several days following cessation of flow.

The basic cause of secondary dysmenorrhea must be treated by a physician. Symptoms of the primary form are generally self-treatable. Therefore, OTC products are indicated for persons with primary dysmenorrhea.

The **premenstrual syndrome (PMS)** is occasionally and erroneously referred to as a third type of dysmenorrhea. Premenstrual syndrome and dysmenorrhea are separate conditions having different etiologies, although some symptoms overlap. The cause of premenstrual syndrome may be a progesterone deficiency or estrogen excess. Alternatively, recent research suggests that it may be due to improper activation of the renin-angiotensin-aldosterone system.

Premenstrual syndrome is also called congestive dysmenorrhea, premenstrual tension, or the premenstrual tension syndrome. Tension is only one symptom of the syndrome, however, so this terminology is not always descriptive of the actual condition.

Premenstrual syndrome is a recurring symptom complex that starts 2 to 12 days before onset of menstruation. It reaches a peak shortly before menses, and normally ceases once the flow begins. However, some women may continue to experience symptoms throughout their cycles. Symptoms consist of those listed in Table 1.

Dysmenorrhea, on the other hand, is characterized by symptoms that begin a day or two before menstruation, continue through menses, and clear at the end. It occurs only during ovulatory cycles. Women may experience 1 or 2 menstrual cycles per year without dysmenorrhea. These occur during months when ovulation does not occur.

TABLE 1

Symptoms of Premenstrual Syndrome

Depression, crying
Irritability, anxiety
Tension, insomnia
Lethargy, fatigue
Mood swings
Dizziness
Dull pelvic ache
Backache
Headache
Headache, migraine
Muscle and joint pain
Peripheral edema
Bloated feeling in abdomen
Tender breasts
Weight gain
Bowel irregularities
Skin changes (urticaria, pruritus, acne)

Primary dysmenorrhea generally appears first within 6 to 12 months after menarch (the time at which a female begins to menstruate). Symptoms are noted 1 to 12 hours prior to commencement of menstruation. Occasionally they begin with the onset of menstrual flow or slightly after. Pain is maximal the first 2 to 24 hours, then tapers off over the next 1 to 2 days.

Symptoms worsen with age, peaking in the late teens or early 20's. Dysmenorrhea occurs more commonly in overweight or in sedentary women. It is also more frequent in women who have regular, rather than irregular menstrual periods. Dysmenorrhea is less severe in women with frequent sexual intercourse, and occasionally improves after childbirth.

Pain is described as a constant low abdominal aching. Additionally, there may be a sharper pain described as "colic-like," that is cyclic in nature. Cycles recur every few minutes to hours and persist 30 to 60 seconds. Pain may radiate to the lower back, vagina, or the inner thighs. Associated responses may include nausea, vomitting, diarrhea and fatigue. Occasionally, the sufferer will report nervousness, irritability, dizziness, and faintness. Some women experience increased menstrual flow during the painful spasms. Not all symptoms of primary dysmenorrhea or premenstrual syndrome may be observed in every patient. However, the

symptom pattern is fairly consistent in most individuals.

Causes of Dysmenorrhea

Menstruation. Early civilizations did not understand the process of menstruation. Frightened by the unknown, menstruating women were sometimes shunned and even punished. During the years of the Roman Empire, Pliny the Elder, in his treatise, *Natural History,* commented on menstruation as, ". . . nothing could easily be found that is more remarkable than the monthly flux of women; contact with it turns new wine sour, crops touched by it become barren, grass dies, seeds in gardens are dried up, and the fruit of trees fall off." Even in more recent times, natives of the MaeEnga tribe of New Guinea believed that blood from a menstuating woman, or even contact with a menstruating woman, was harmful to a man and might even cause his death.

Hippocrates in the fifth century B.C. believed that dysmenorrhea was caused by cervical obstruction. This blocked the menstrual discharge, causing it to stagnate and induce discomfort. Today it is known that cervical obstruction may indeed cause retention of menstrual discharge with resultant irritation and contractility of uterine muscle. The pain characteristics in persons with known cervical obstruction differ from those of dysmenorrhea, however. So it is unlikely that the "obstructive theory" is a plausible explanation.

It is generally believed that symptoms of dysmenorrhea and premenstrual syndrome are caused by an imbalance of normal prostaglandin levels. Those prostaglandins believed to be involved are synthesized in the endometrium, the mucous lining of the uterus. Levels of both prostaglandin F_{2alpha} prostaglandin E are known to be increased.

Prostaglandin F_{2alpha} stimulates the myometrium (muscular wall of the uterus). This in turn causes pain due to ischemia (inadequate oxygen supply). Ischemia develops because the muscular contraction requires an increased blood flow, and blood cannot be delivered quickly enough. So, pain develops much like chest pain in susceptible persons with angina pectoris. This theory is logical since dysmenorrhea often increases after childbirth; and during gestation, there is increased vascularization with increased blood supply to the uterus.

In women with dysmenorrhea, the uterine muscle is also believed to be more sensitive than normal to prostaglandin F_{2alpha}. Furthermore, prostaglandins may also cause a release of bradykinin and histamine which are potent vasodilators. They, in turn, irritate nerve endings and cause further pain. Other symptoms (nausea, diarrhea, etc.) may be induced by circulating prostaglandins. The initial event that causes prostaglandin release to precipitate symptoms remains unknown. It could be neuronal, hormonal, or even psychological. It is known, for example, that oral estrogen-progesterone therapy, or sympathomimetics can control dysmenorrhea. Psychological conditioning also helps in certain individuals.

The prostaglandin-induced theory is now generally accepted as the basis for understanding dysmenorrhea and developing new drugs to treat it. On the other hand, not all women with primary dysmenorrhea have elevated prostaglandin levels. Furthermore, not all women respond to prostaglandin synthesis inhibitors. Therefore, there still may be other, yet undiscovered causes.

Treatment

Through the years, remedies have consisted of inhaling vapors of various herbs, applying heat, and taking opium, nitroglycerin and alcohol. Surgical removal of the ovaries was performed in severe cases.

More recently, drugs to treat symptoms of premenstrual syndrome and primary dysmenorrhea have been restricted to several pharmacological classes. These include analgesics, diuretics, smooth muscle relaxants, and antihistamines. The FDA Advisory Review Panel on OTC Miscellaneous Internal Drug Products evaluated ingredients on empirically related clusters of symptoms. It considered pain (muscle stiffness, headache, cramps, backache, fatigue, and general aches and pains), water-retention (weight gain, skin disorders, painful breasts, swelling), and negative affect (crying, loneliness, anxiety, restlessness, irritability, mood swings, depression, tension) to be most appropriate for evaluating effectiveness of the agents.

The panel has reported its findings on ingredients included in OTC menstrual products. It classed these ingredients as Category I (generally recognized as safe and effective), Category II (unsafe and/or ineffective), or Category III (safe, but effectiveness not yet

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CORRESPONDENCE COURSE

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substantiated). These recommendations are summarized as follows.

Analgesics

Pain of primary dysmenorrhea and premenstrual syndrome is classed as mild to moderate in intensity. The analgesics listed in Table 2 were shown by the FDA/OTC panel to be safe and effective for treating this type of pain.

Aspirin. Since the pain of dysmenorrhea is presumably caused by prostaglandins, aspirin probably works, at least in part, by interfering with prostaglandin synthesis. The other salicylate derivatives most likely act in a similar manner.

Table 2

Category I Ingredients For OTC Menstrual Products

Salicylates (aspirin, calcium carbaspirin, choline salicylate, magnesium salicylate, sodium salicylate)
Acetaminophen
Ibuprofen*
Ammonium chloride
Caffeine (as diuretic)
Pamabrom
Pyrilamine maleate

*Determined by the FDA Arthritis Advisory Committee rather than the OTC advisory review system.

Acetaminophen. Acetaminophen is equivalent to aspirin on a mg-to-mg basis for noninflammatory pain. This includes pain associated with primary dysmenorrhea and premenstrual syndrome.

Ibuprofen. Ibuprofen was unanimously recommended by the FDA Arthritis Advisory Committee to be switched from prescription-only status to OTC availability. Its switch to OTC status involved a different system than previous status changes through the FDA/OTC advisory panel efficacy review. It was the first FDA-initiated conversion of a major drug. One of its OTC indications is the treatment of primary dysmenorrhea.

Many studies that compare ibuprofen with aspirin and/or acetaminophen rate ibuprofen significantly better on a mg-to-mg basis. In treating pain of primary dysmenorrhea, 200 mg of ibuprofen is equivalent to or greater than 650 mg of aspirin or acetaminophen. Moreover, there does not appear to be any difference in the character of pain relief when ibuprofen is given after onset of pain compared to administration before it occurs.

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Codeine. Codeine, taken in doses of 30 to 60 mg, is safe when used under physician supervision. However, because of its potential for causing physical dependence, the advisory panel concurred it is not safe for OTC use as an analgesic. It, therefore, placed codeine in Category II. A different OTC advisory panel indicated that safe doses lacked conclusive proof of effectiveness of codeine as a single ingredient analgesic and rated it as Category III.

Caffeine. Used alone in doses of 100 to 200 mg every 3 to 4 hours, caffeine is safe for self-administration, but ineffective as an OTC analgesic. Substantial evidence supports caffeine use at a dose of 65 mg (up to 600 mg per 24 hours) with analgesics, yielding enhanced pain relief activity. Therefore, the advisory panel placed caffeine in Category III, indicating that manufacturers can conduct appropriate clinical trials to assess its role in menstrual pain relief. If these studies are successful, caffeine can remain on the market in combination with analgesic agents indicated for alleviating dysmenorrhea.

Diuretics

The only proper use for an OTC diuretic is to help eliminate fluid that accumulates during the premenstruation and menstrual periods. Symptoms of water-weight gain, bloating, swelling, and/or full feeling should be relieved. Each of these symptoms is self-diagnosable, self-limiting, and not associated with a potentially serious underlying disorder. The panel members, therefore, indicated that these symptoms could be self-treated.

The exact cause of fluid accumulation during the premenstrual period is not known. Fluid is not always present. But it is generally accepted that this edema, which occurs in various organs, is responsible for many of the symptoms of dysmenorrhea.

Ammonium Chloride. Ammonium chloride is the most commonly used of the so-called "acidifying diuretics." Doses up to 3 grams per day are safe for OTC use. Individuals with renal and/or hepatic disease should avoid the drug. In persons with impaired kidney function, progressive hyperchloremic acidosis can result. In persons with liver disease, symptoms similar to hepatic coma have been reported.

Ammonium chloride is absorbed from the gastrointestinal tract and the ammonium ion is converted in the liver to urea. This frees the chloride, which reacts with sodium bicarbonate to form sodium chloride. This then causes increased sodium chloride elimination which takes water with it. The diuretic action is limited limited to 3 to 4 days because, by then, the kidney begins to produce ammonia. This ammonia combines with hydrogen to form ammonium ion that will be excreted along with chloride ion from above, negating the overall diuretic effect.

Thus, ammonium chloride has limited application for long-term use. It is suitable for inducing a short-term fluid loss.

Caffeine. Though classed as a questionable analgesic, caffeine is a safe and effective diuretic in doses of 100 to 200 mg every 3 to 4 hours. Caffeine increases the glomerular filtration rate in the kidney. This action enhances water output, although sodium, calcium, potassium and chloride ions, and to a lesser extent, urea, are also excreted. The FDA advisory panel concluded that caffeine could be recommended to relieve symptoms of water-weight gain, bloating, swelling, and/or full feeling associated with the premenstrual and menstrual periods.

Caffeine was classed by still another OTC advisory panel as a Category I central nervous system stimulant at doses of 100 to 200 mg every 3 to 4 hours. Thus, it is also effective for symptoms of fatigue associated with the premenstrual period.

Pamabrom. Like caffeine, pamabrom is also a xanthine derivative. A dose of 50 mg up to 4 times per day is safe and effective for self-administration. In one study, doses of 800 to 1600 mg pamabrom were given for 5 to 7 days to pregnant women with edema. There were no symptoms of toxicity. The overall pharmacological effects of pamabrom are similar to those expected with caffeine.

Theobromine Sodium Salicylate and Theophylline. Both of these share several pharmacologic actions with other xanthines. Both are also safe for OTC use. Neither ingredient, however, has yet been established as an effective diuretic. Thus, both substances will be allowed to remain on the market, at least temporarily, as long as studies to prove their efficacy are ongoing.

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CORRESPONDENCE COURSE

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Smooth Muscle Relaxants

The panel did not place any smooth muscle relaxant ingredient in Category I. Homatropine methylbromide was classed as Category II. Homatropine, like other anticholinergics, is unsafe for self medication at doses required for pharmacological activity.

Cinnamedrine Hydrochloride. This agent was also placed in the "needs more study" category. It is safe at usual doses of 15 to 30 mg every 4 hours up to 120 mg per day, but there are insufficient data to establish its effectiveness. Cinnamedrine is an unsaturated tertiary amine similar in structure to ephedrine. Although some other drugs with similar structures are recognized as being smooth muscle relaxants, cinnamedrine must undergo the appropriate clinical studies to substantiate its effectiveness.

Antihistamines

Pyrilamine Maleate. This antihistamine was shown to be safe and effective in doses of 25 to 50 mg every 3 to 4 hours, or 60 mg every 12 hours (maximum 200 mg/24 hours) for OTC use in relieving the symptoms of the negative affect and water-retention clusters, and pain of cramps and backache of the premenstrual and menstrual periods. Pyrilamine also has mild local anesthetic and analgesic activities. The advisory panel stated that pyrilamine was unique among antihistamines in that it possessed certain pain relief and diuretic properties. It has been traditionally marketed in combination with other ingredients in OTC products for relief of premenstrual tension.

Its mechanism of action is unknown and may be based partly on an antihistamine effect. It is known that the amount of histamine in the body increases and descreases with flucuations in estrogen levels during the menstrual cycle. Or, the mechanism may be through reducing prolactin levels with a secondary reduction in synthesis of prostaglandins. There is some evidence that pyrilamine may also directly inhibit prostaglandin action on the uterine musculature.

The advisory panel concluded that pyrilamine maleate is generally recognized as effective in relieving premenstrual symptoms of the negative affect and water-retention clusters. It is also effective in relieving pain of cramps and backache in both the premenstrual and menstrual periods. If it is indicated for relief of any menstrual or premenstrual symptom, it must be marketed in combination with a diuretic or diuretic and analgesic.

Vitamins

Pyridoxine Hydrochloride (vitamin B_6). This vitamin has been cited in the literature as effective for symptoms of primary dysmenorrhea and premenstrual syndrome. Pyridoxine is safe in doses up to 200 mg. daily for OTC use. However, its effectiveness still needs to be demonstrated clinically.

Botanical Herbs

A wide variety of preparations, usually as the alcoholic extracts, containing botanical or vegetable herbs have been used in OTC products since the early 1800's. The panel reported that detailed studies have not been conducted to assess effectiveness of any of these ingredients, and certain ones are known to be toxic. The panel classed all herbal ingredients as Category II.

Combinations of Ingredients

As explained earlier, the premenstrual syndrome and primary dysmenorrhea are separate clinical entities. So it is logical to combine ingredients to treat the multiple symptoms concurrently. While some symptoms are common to both, others occur predominately in one or the other condition. For example, symptoms of water-retention are commonly seen in the premenstrual syndrome, but are less common in dysmenorrhea. Pain and cramping on the other hand, are common to both conditions. It is, therefore, rational to combine an analgesic with a smooth muscle relaxant. However, since there are currently no proven safe and effective smooth muscle relaxants, combining a known Category I analgesic with an unproven smooth muscle relaxant would result in an ineffective combination product. Remember, the test for efficacy of a combination drug in this country is that *all* active ingredients must contribute to the total therapeutic effect. There are two combinations that meet this test; a diuretic with an antihistamine, and a diuretic, antihistamine, and analgesic. Such combinations may continue to be marketed as long as they include Category I ingredients.

The combination of the two diuretics, ammonium chloride and caffeine, is also logical. This assumption is based on the mechanisms of action of each drug which are different and

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additive. The panel recommended that any two Category I diuretics could be combined as long as they have different mechanisms of action.

Table 3 lists combinations of active ingredients that may be marketed as OTC menstrual products and indicated for appropriate symptoms.

TABLE 3

Combinations of Active Ingredients Permitted For OTC Menstrual Products

Analgesic plus Diuretic
Analgesic plus Antihistamine plus Diuretic
Diuretic plus Antihistamine
Two Diuretics**

*Established by an FDA/OTC advisory panel. Each ingredient must be Category I.
**Must have different mechanisms of action.

Patient Advice

The advisory panel noted that individual symptoms of a cluster cannot be stated on product labels unless the drug has been demonstrated to be effective for each of them. In other words, for the label to specifically indicate that the product is effective for cramps, it must also be effective for headache, muscle stiffness, and each of the other components of the pain cluster.

Consumers seeking an OTC product intended for relief of menstrual discomfort should be questioned as to which specific symptoms are being experienced. Appropriate products can then be selected that are tailored to treat those symptoms. If one product fails to provide adequate relief, another one with different ingredients, can be tried since they have different mechanisms of action. Table 4 lists representative OTC products, and Table 5 summarizes important information about them.

Besides using OTC products, symptoms of menstruation may be relieved in other ways. These include applying heat to the abdomen and pelvic area or taking hot baths, massage, deep breathing, and bed rest. Drinking hot beverages and restricting sodium intake also helps.

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TABLE 5

Consumer Advice For OTC Menstrual Products

- Keep out of the reach of children.
- In case of accidental overdose, contact a poison control center, emergency medical facility, or physician immediately.
- Do not take this medication for longer than 10 consecutive days.
- This product may be taken with food or milk if it upsets your stomach.
- For products containing pyrilamine maleate: This product may cause drowsiness.
- For products containing ammonium chloride: Do not take this longer than 6 consecutive days. Do not take it if you have liver or kidney disease.
- For products containing caffeine: This product may cause sleeplessness if taken within 4 hours of bedtime

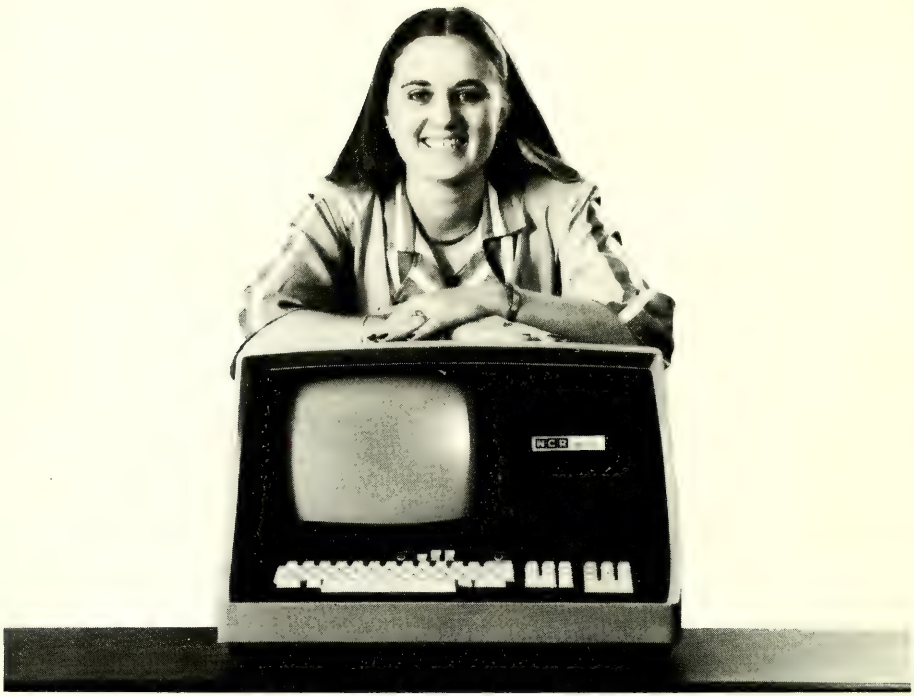
TABLE 4

Representative OTC Products For Menstrual Disorders

	INGREDIENTS* (mg)							
PRODUCT	**AS**	**AC**	**IB**	**AM**	**CA**	**PA**	**CI**	**PY**
Advil			200					
Aqua-Ban				325	100			
Cope**	421				32			
Dimensyn		500				25		15
Midol	454				32.4		14.9	
Midol Maximum Strength	500				32.4		14.9	
Midol PMS		500				25		15
Nuprin			200					
Pamprin		325				25		12.5
Pamprin Maximum Cramp Relief Formula		500				25		15
Premesyn PMS		500				25		15
Pursettes Premenstrual		500				25		15
Sunril Premenstrual		300				50		25
Trendar		325				25		

*AS: Aspirin; AC: Acetaminophen; IB: Ibuprofen; AM: Ammonium chloride; CA: Caffeine; PA: Pamabrom; CI: Cinnamedrine; PY: Pyrilamine maleate

**Also contains magnesium hydroxide 50 mg, aluminum hydroxide 25 mg.



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LOCAL NEWS

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Glaxo Inc., of Research Triangle Park, North Carolina, through a $25,000 grant to Phi Delta Chi Pharmacy Fraternity, has funded the Albert B. Prescott Leadership Award in perpetuity. William H. Edmondson, Ph.D., Vice President, Government Affairs/Professional Relations, at Glaxo, and Lawrence C. Weaver, Ph.D., of the Fraternity's Board of Counsellors, were instrumental in creating the perpetual fund.

The Albert B. Prescott/Glaxo Leadership Award is given annually to a young pharmacist no more than 10 years into her or his career. The Prescott Leadership Recipients have demonstrated exemplary leadership qualities as students and young pharmacists indicative of someone likely to emerge as a major leader in pharmacy over the course of his or her career. The recipients receive a $1000 honorarium, travel expenses to a national pharmacy convention where a scholarly lecture is delivered, and a painting of Dr. Prescott from the Parke-Davis History of Pharmacy Series.

Albert B. Prescott was a maverick in the late 1800s because of his advocacy for an academic basis for pharmaceutical education. Founder and Dean of the College of Pharmacy at the University of Michigan, Prescott nurtured his idea for nearly 25 years before the rest of the profession caught up with his vision. In 1900, Prescott was the first president of the American Association of Colleges of Pharmacy, and many schools date their founding from around the turn of the century. This chemist, educator, and leader of pharmacists was also instrumental in the founding of Phi Delta Chi at the University of Michigan in 1883, and he was the advisor to the Alpha Chapter and the first honorary Brother of the Fraternity.

Dean Tom S. Miya, *center,* receives the final payment on the $5,000.00 Fonnie Jackson Andrews bond from Kappa Psi brothers Brian Baines, *left,* and Bob Morgan. The bond was part of the funds borrowed to build the Kappa Psi house on Finley Road. The final payment on a similar amount borrowed from the NCPhA is expected this summer.

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CORRESPONDENCE COURSE QUIZ
OTC Menstrual Remedies

1. The term *dysmenorrhea* most accurately refers to:
   a. a lack of menstrual flow.
   b. excessive menstrual flow.
   c. painful menstrual flow.
   d. the presence of blood in menstrual flow.

2. Pamabrom is included in OTC menstrual remedies to provide which of the following activities?
   a. Analgesic
   b. Antihistaminic
   c. Diuretic
   d. Sedative

3. Prostaglandins that are thought to be most involved in the dysmenorrhea syndrome are synthesized in the:
   a. endometrium.
   b. mast cells.
   c. ovaries.
   d. vaginal lining.

4. Which of the following cautions is required on the labels of OTC menstrual remedies that contain pyrilamine?
   a. Do not take if you have kidney disease.
   b. May cause sleeplessness if taken within four hours of bedtime.
   c. May discolor the urine.
   d. May cause drowsiness.

5. Which of the following is considered to be a self-treatable condition?
   a. Congestive dysmenorrhea
   b. Extrinsic dysmenorrhea
   c. Primary dysmenorrhea
   d. Secondary dysmenorrhea

6. The FDA advisory panel that reviewed OTC menstrual remedies classified the symptoms of dysmenorrhea into three "clusters" of related problems. The clusters so classified include all of the following EXCEPT:
   a. increased flow.
   b. negative affect.
   c. water-retention.
   d. pain.

7. All of the following combinations of Category I ingredients are approved for OTC marketing in menstrual remedies EXCEPT:
   a. acetaminophen and pamabrom.
   b. caffeine and pamabrom.
   c. aspirin and pamabrom.
   d. pamabrom and pyrilamine.

8. The Pamprin product line contains all of the following ingredients EXCEPT:
   a. acetaminophen.
   b. cinnamedrine.
   c. pamabrom.
   d. pyrilamine.

9. All of the following analgesics are approved for self-medication of dysmenorrhea EXCEPT:
   a. acetaminophen.
   b. aspirin.
   c. codeine.
   d. ibuprofen.

10. Which of the following is considered to be the most likely cause of premenstrual tension?
    a. Deficient levels of estrogens
    b. Deficient levels of prostaglandins
    c. Deficient levels of follicle stimulating hormone
    d. Deficient levels of progesterone

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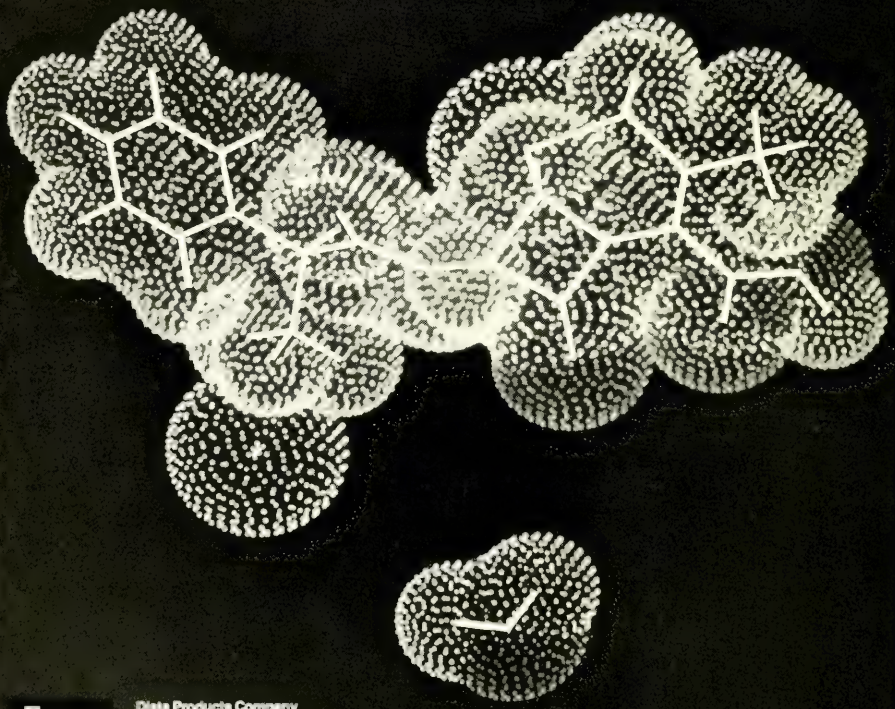

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WHY DO WOMEN LIVE LONGER THAN MEN

The higher death rate from heart disease and the tendency for men to adopt certain high-risk behaviors are the main reasons women live longer than men, according to participants in the recent NIH Conference on Gender and Longevity*. On average, women currently live 7 years longer than men in the U.S., a period of years known as the "gender gap."

The conference provided a forum for discussions on the biological and psychosocial differences that have been shown to affect male and female mortality. Research findings were presented on such topics as the effect of sex hormones on atherosclerotic heart disease, male-female differences in health behaviors, gender patterns in violent death, stress and immunity, and the X and Y chromosomes.

According to epidemiologist Dr. Constance Nathanson of the John Hopkins University, the single greatest contributor to the gender gap is atherosclerotic heart disease, which accounts for as much as 40 percent of the sex differential. Increased heart disease in men is caused by higher blood levels of low-density lipoprotein cholesterol throughout adulthood, which was discussed by Dr. William R. Hazzard of Bowman Gray School of Medicine in Winston-Salem. Lipoproteins, fatty substances in the blood that build up on the inner linings of coronary arteries, produce the disease called atherosclerosis. This can eventually lead to heart disease and stroke. Dr. Hazzard also reminded the audience about the new cholesterol-lowering drug lovastatin (the generic name), which was recently approved by the Food and Drug Administration and is expected to help reduce the male death rate from heart disease in the future.

Social and behavioral factors account for another one-third of the sex differential making up the gender gap. Causes of death in men include high rates of suicide, automobile and other accidents, cirrhosis of the liver, lung cancer, and emphysema — all of which result from behaviors that society encourages or finds more acceptable in men than in women. Such behaviors include using guns, drinking alcohol, smoking cigarettes, and working at hazardous jobs. While some trends are beginning to change (for example, men are smoking and drinking less), Dr. Paul Holinger, a psychiatric epidemiologist from Rush Medical College in Chicago, said that violent deaths (homicide, suicide, and automobile accidents) continue throughout life at higher rates for men than women.

Other factors possibly contributing to the gender gap may be differences in genetics or immune function. While sex differences at the genetic level are beginning to be understood, further research is needed to show whether genetic differences have a direct effect on longevity or whether they have a secondary effect (in which the genes determine sex hormones which in turn affect longevity). Also, although there is a well-documented decline in immune function with advancing age, researchers need more information on how the immune system is affected by age, sex hormones, and the genes.

Concluding remarks by Drs. Nathanson, Hazzard, and other conference participants indicate that research on gender differences is still in an early stage, and more information will be necessary to gain a clear understanding of the variables controlling longevity. Meanwhile, current data show the gender gap will continue to widen during the next 4 decades as our population ages. New drugs for heart disease and improvements in lifestyle may reduce the male death rate to some extent; however, there are probably other sources determining longevity as well. Thus, Dr. Lois Verbrugge of the University of Michigan in Ann Arbor recommended to the meeting that convening future interdisciplinary workshops will be important as research findings begin to clarify those variables responsible for human longevity.

Related Reading

An in-depth summary of this conference is given in the article "Why Do Women Live Longer Than Men?" in *Science* Vol. 238, October 1987, pages 158-160.

The National Institute on Aging offers a 2-booklet package entitled *Answers About Aging.* One booklet is "New Pieces to an Old Puzzle" which discusses theories on the causes of aging, and the second booklet is "The Aging Woman/The Aging Man" which reviews many of the physical changes that occur normally with age. To obtain single copies of *Answers About Aging,* write to the NIA Information Center, 2209 Distribution Circle, Silver Spring, Maryland 20910.

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PEOPLE NEWS

KERR SELECTED AS PRACTITIONER-IN-RESIDENCE AT UNC

Banks D. Kerr, founder of the Raleigh-based Kerr Drug Stores, has been selected as the first W. J. Smith Practitioner-in-Residence at the University of North Carolina at Chapel Hill School of Pharmacy.

The practitioner program, established by the school and Glaxo Inc., is designed to identify and bring innovative pharmacy practitioners to UNC to interact with students and faculty, and to influence students in their career decisions.

Kerr visited the school Feb. 29 – March 1 and attended classes, gave lectures and met informally with students and faculty.

He was selected from a pool of well-known pharmacists nominated by national pharmaceutical associations, Glaxo Inc. and the UNC pharmacy faculty.

Dr. George H. Cocolas, dean of student affairs and chairman of the selection committee, said the appointment was influenced by "Kerr's success story of a single person who, through good business judgments and hard work, was able to develop his pharmacy enterprise."

Kerr began his company with a small store — The Village Pharmacy — in the Cameron Village Shopping Center in Raleigh in 1950. The chain now has 83 stores in North Carolina and a store in Myrtle Beach, S.C., with more than 1,500 employees and annual sales of more than $100 million.

The program honors W. J. Smith of Chapel Hill for his contributions to North Carolina pharmacy. Now retired, Smith was secretary of the N.C. Pharmaceutical Association for 37 years.

BIRTHS

Mr. and Mrs. David Griffin, Knoxville, announce the birth of a son, January 3, 1988, weighing six pounds, fourteen and three fourths ounces. David is a medical services liason with The Upjohn Company, 1983 graduate of the UNC School of Pharmacy and son of Mr. and Mrs. Sandy Griffin of Burlington.

DEATHS

Samuel Woodrow McFalls

Sam W. McFalls, Greensboro, died Friday, January 8, 1988 after a long illness. He was 72 years old. McFalls was installed as President of the NCPhA at the convention in Asheville in 1959 and served in that office for the 1959-1960 Association year. He was a native of Newton, attended Wofford College and Lenoir Rhyne, and graduated from the UNC School of Pharmacy in 1940. He operated pharmacies in Greensboro until his retirement.

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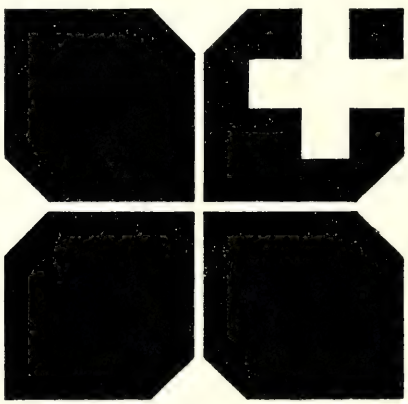

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WANT TO BUY: This Iowa pharmacist licensed in NC would like to purchase a pharmacy in Eastern NC. Strictly confidential. If you are interested in selling your pharmacy, please contact Box RTU, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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continued on page 36

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Continued from page 35

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Wallace E. Nelson, RPh., Director of Pharmacy, Chowan Hospital honored by Roerig. (See page 29 for story.)

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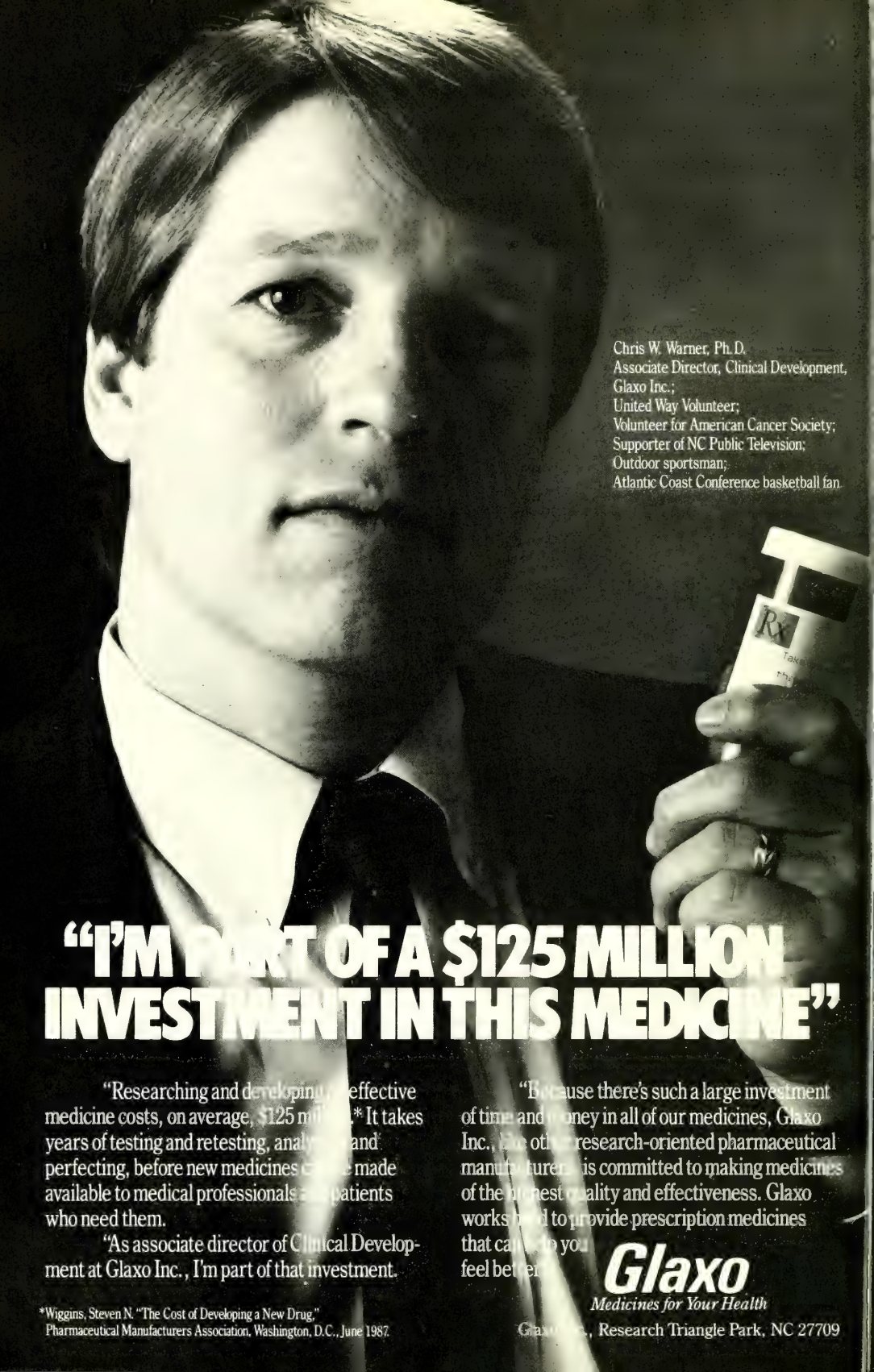

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*Wiggins, Steven N. "The Cost of Developing a New Drug," Pharmaceutical Manufacturers Association, Washington, D.C., June 1987.

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PHARMACY NETWORK ACTIVE IN MANY AREAS

Marketing a prescription card system to HMO's, insurance companies, third-party administrators and self-insured companies is the main purpose of the Pharmacy Network of North Carolina. This activity occupies most of our time and we see several excellent contracts on the horizon. We know that our members are anxious to see results and appreciate the support and patience that has been demonstrated. It takes a long time to sell a new idea and a new organization. It also takes large companies a long time to make a decision to change or try something new.

We have been busy marketing, developing a data base and completing calculations to demonstrate the dollar value of our service. The value of community pharmacies is real but we just have to talk dollars and cents to our potential customers.

We have also spent a great deal of time on activities which have and will benefit community pharmacies by helping preserve current business. Much of this activity has not benefited PN/NC directly. However, we feel that anything we do to help protect your business is an appropriate activity for us.

We have been actively fighting mail-order proposals. We were given a copy of one proposal and asked to evaluate it. This was a very well written proposal and contained some good discounts from AWP and a dispensing fee of $3.25. We spent a lot of time (and calculator tape) trying to show cost comparisons and develop material to help this company understand that the dispensing fee is not as important as utilization in determining the total cost of a drug benefit. We may not get this business but I believe that they will not implement the mail-order option.

We also spent several days in two communities down east combating a contract which was favorable to one group of stores. The result has been that other stores can continue to serve the employees of these companies and receive a reasonable fee.

The PN/NC staff and board of directors is working hard for pharmacy in North Carolina. We are taking a look into the future and making every effort to position ourselves to be prepared for the changes and pressures we see coming. Our sole purpose is to help protect the most trusted and accessible health care professional, the pharmacist.

K MART ESTABLISHES PHARMACY SCHOLARSHIP PROGRAM

K mart Corporation announced the implementation of the K mart Scholarship Award program. A $1,000 scholarship award will be granted to each school to support undergraduate pharmacy education and encourage talented students to pursue careers in Retail Pharmacy.

The first awards will be made in the spring of 1988 to one student at each of the 46 pharmacy schools for the fall 1988 school term. The recipient of the award will be pharmacy student in good academic standing in the second or third professional year who has demonstrated interest in the Retail Practice of Pharmacy.

"The K mart Pharmacy Scholarship Award program symbolizes K mart's commitment to the profession of pharmacy and an investment in the future of this fine profession," said Howard A. Kramer, director of K mart pharmacy personnel.

"It is our intention as a corporation to support undergraduate pharmacy education and encourage talented students to pursue careers in Retail Pharmacy," added Kramer.

JET LAG: FAR-REACHING CONSEQUENCES OF RAPID TIME ZONE CROSSING

by William C. Dement, M.D., Ph.D.
Professor of Psychiatry and Behavioral Sciences
Director, Sleep Disorders Center
Stanford University School of Medicine
Stanford, California

Jet lag can not only change individual life histories, it can also alter the course of world history.

Former United States Secretary of State John Foster Dulles flew to Egypt in the 1950s to negotiate a treaty concerning construction of the Aswan Dam. These difficult negotiations took place close on the heels of his arrival, catching him at less than his best. Dulles believed that this was a contributing factor in his losing the project to the Soviet Union. A decade of Soviet influence in Egypt thus began. Learning from this experience, Dulles advised U.S. diplomats to try to avoid conducting important meetings immediately following such long-distance jet travel.

For Olympic athletes who must travel to distant lands and give peak performances, the potential for problems is similarly great. U.S. Olympic diver Greg Louganis claims that the reason he struck his head on a diving platform at the 1979 Olympic trials in Moscow was that jet lag had diminished his coordination and thrown off his timing.

"The Time is Out of Joint; O Cursed Spite, That Ever I Was Born to Set It Right!"

Jet lag is the temporary decline in physical and psychological well-being that results when an individual rapidly crosses several time zones. The internal clock governing daily (circadian) rhythms of various body functions is not coordinated with the new external time. The more time zones one crosses, the more profoundly "out of joint" one becomes.

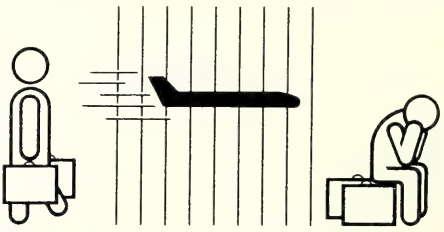
As the body tries to adapt, to "set it right," some functions readjust more rapidly than others. This creates new problems: Specific body rhythms — of hormone secretions, temperature changes, sleeping and waking, and hunger, for example — are no longer properly sequenced with each other.

A third ingredient, lack of sleep, amplifies the problem. These factors eventually sort themselves out, but it takes time — an average of 24 hours for each time line crossed.

Symptoms of Jet Lag and Their Impact

When I'm asked if jet lag is important, my answer is that it can indeed have a very significant impact. Its magnitude depends, in part, on why people are traveling and on how well they've planned. Some 70 to 75 percent of those going long distances east or west suffer jet lag.

To give you some idea of the number of people who make this kind of trip, I will cite just one



Some 70 to 75 percent of travelers who rapidly cross several time zones suffer jet lag. In 25 to 30 percent of travelers, the problem is severe.

statistic: U.S. airlines alone carried more than 29 million passengers on international flights in the year from June 1985 through May 1986. Taking into account that perhaps only half of these travelers were flying east or west, we're still talking about huge numbers, and again, these are only passengers on U.S. airlines.

For travelers who are tourists and have allowed a few days of leisure after the flight and before taking up a rigorous sightseeing schedule, jet lag may not be a great handicap. On the other hand, jet lag has ruined or lessend the pleasure of many a vacation. Most people today seem to travel on tight schedules, even when traveling for leisure. So they may be somewhat impaired those first few days when trying to drive a car, for example. This can be a particular hazard when they must also cope with unfamiliar roads and foreign-language road signs — conditions that require them to be especially attentive.

Business travelers often arrive at their destinations just in time for important meetings or work assignments, or they arrive at night and must confront a full schedule the following day. In my

research and that of other sleep experts, we've tested flight crews, jet passengers and others whose sleep/work schedules have been shifted, and we've found the following symptoms to be common in the days immediately following arrival:

- Sleep disturbances
- Fatigue
- Digestive problems
- Hunger at odd hours
- Frequent urination
- Depression, anxiety, irritability and aggression
- Headaches, other aches
- Dizziness, nausea, fainting spells
- Diminished alertness, confusion
- Performance impairment — loss of strength and psychomotor coordination, slowing of reflexes, diminished ability to learn and remember, and less acute judgment and reasoning

The list of ill effects doesn't stop there. Female flight attendants show a tendancy toward menstrual cycle irregularities after short-term exposure to time zone shifts, though these seem to correct themselves with long-term exposure.

And individuals taking scheduled medications — for example, diabetic individuals who require daily insulin — must cope with the difficulty and risk of not being able to keep doses synchronized with normal metabolic rhythms.

Musicians, surgeons, flight crews, soldiers, business people and astronauts — they're all in the same leaky boat when it comes to the ill effects jet lag can have on performance.

Space Exploration and Sleep Lab Research Are Providing Answers

An astronaut hurtling through space circles the earth several times a day, continually crossing time zones, not locking the vehicle into any local time. So, without proper strategies for dealing with it, jet lag can be a major obstacle to adjustment and adequate functioning in space.

A 1976 study — a relatively early work in the young field of sleep disorders research — found the cockpit crew on long transatlantic airline haul suffered severe sleepiness. The chief pilot even showed microsleep brain wave patterns during quiet periods in the flight — an indication that he was overwhelmed at times by his need for sleep. This was probably due to a combination of factors: lack of sleep, the physical stresses of the environment within the airliner, and jet lag.

In a Russian study published in 1981, student pilots whose sleep-wake periods were advanced by 2.5 hours — in other words, they went to bed and rose 2.5 hours earlier than usual — showed a 35 percent increase in flight performance errors.

These and other findings make jet lag the concern not only of sleep disorders specialists who work at medical centers around the U.S. and in other parts of the world, but also of space agencies in various countries. A few studies in this area have been done by the National Aeronautics and Space Administration (NASA), some in combination with the European Space Agency. Several others have been conducted by Russian investigators.

Among the aspects of jet lag treatment that we're actively investigating — in our California laboratory and in a sleep laboratory in Japan —is the possible benefit of taking short-acting sleep medications to speed adjustments during the first few nights in a new time zone.

We have yet to master jet lag. In fact, we are just beginning to better understand and learn how to deal with it. Perhaps the most significant piece of information to come out of these studies is the

continued on page 8

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JET LAG

Continued from page 7

discovery of how profound jet lag can impair us. In effect, we've realized that until we conquer it, we must make allowances for it and take steps against it to help protect our health and safety.

HEALTH TIPS FOR TRAVELERS

1. **Travel Kit** should include:
   - ☐ First aid supplies
   - ☐ Thermometer
   - ☐ Mild pain reliever
   - ☐ Hydrocortisone Cream
   - ☐ Antacid
   - ☐ Laxative
   - ☐ Diarrhea medication
   - ☐ Cough/cold remedies
   - ☐ Antihistamine
   - ☐ Nasal Spray
   - ☐ Insect repellent
2. **If you become ill:** Phone your regular doctor and/or ask U.S. embassy or your hotel for a local physician.
3. **Chronic patients:** Discuss trip plans with your doctor; wear medical alert tag or carry medical history card.
4. **Medical insurance:** Check terms of your coverage.
5. **Prescription medications:** Take in original containers.
6. **Eyeglasses:** Carry a spare pair or copy of prescription.
7. **Where sanitation is poor:** Avoid water, ice, unpeeled fruit, raw vegetables.
8. **Travelers to Third World:** Consult public health office on immunizations.

This article is part of a series provided as a service to pharmacists by The Upjohn Company.

RETIN-A LOOK-A-LIKES

North Carolina Department of Agriculture Food and Drug Protection Division officials today warned consumers that they are being cheated when they purchase over-the-counter creams or lotions that claim to contain Retin-A or have the same effects on skin as Retin-A.

"Retin-A is available by prescription only," said Agriculture Commissioner Jim Graham. "A lot of imitators are advertising creams claimed to contain Retin-A or which supposedly have the same effect when used as Retin-A. These lotions and creams are rip-offs, pure and simple."

Retin-A, manufactured by Ortho Pharmaceutical Corporation of Raritan, New Jersey, came under intense interest when a short-term study of th use of Retin-A to treat sun-related aging (premature wrinking of the skin due to sun damage) showed statistically significant improvement in 30 patients.

"Due to these study results," stated Robert L. Gordon, director of the NCDA Food and Drug Protection Division, "many consumers saw this drug as the answer to their wrinkling problem. Unfortunately, when advertising started appearing for the imitation Retin-A creams, many unsuspecting consumers purchased the over-the-counter creams, often at higher prices than the real Retin-A, not realizing that they were getting bilked. The only real Retin-A you can get is by prescription from a physician."

Currently, according to the federal Food and Drug Administration, Ortho is conducting clinical trials of Retin-A for safety and effectiveness for photoaging under an investigational new drug exemption, but Retin-A has not yet been approved for use for photoaging.

The FDA also has reminded consumers that no drug is without side effects. In the case of Retin-A, it is known to cause redness, blistering, severe local swelling, peeling and photosensitivity in some patients. Also, the possible carcinogenic effects of its use over prolonged periods of time have not been evaluated.

March, 1988

SEIGLER NEW MANAGER OF BURROUGHS WELLCOME GREENVILLE SITE

Lawrence L. Seigler

Lawrence L. (Larry) Seigler has been appointed General Manager of the Greenville site of Burroughs Wellcome Co,. and will manage a variety of support functions at the facility.

Burroughs Wellcome's Greenville site currently has almost 1,600 employees engaged in the manufacturing of more than 90 different prescription and non-prescription products produced by Burroughs Wellcome.

Prior to this new position, Seigler was director of production and engineering information and administration service. He succeeds Jim Goes who retired March 31.

Seigler, who holds a B.S. degree in pharmacy from the University of North Carolina at Chapel Hill, joined Burroughs Wellcome in 1971. A native of Greensboro, he has held a variety of positions within the company and previously served as manager of both the pharmaceutical manufacturing division and the solid dose formulations division.

A licensed pharmacist, Seigler is a member of the North Carolina Pharmaceutical Association, the Down East Pharmacy Society and the local chapter of the American Production Control Society. He serves as a member of the advisory committee for the Industrial Pharmaceutical Technology Program at Wake Technical College.

Seigler also is vice president of the Board of Directors for the Burroughs Wellcome Credit Union. Seigler and his wife Betsy have three children and are members of St. Paul's Episcopal Church. He enjoys fishing, camping, woodworking and photography.

Congratulations to David R. Work, Executive director of the North Carolina Board of Pharmacy, who was elected to a three-year term on the Executive committee of the National Association of Boards of Pharmacy. The election was held during the NABP Annual Meeting in San Antonio.

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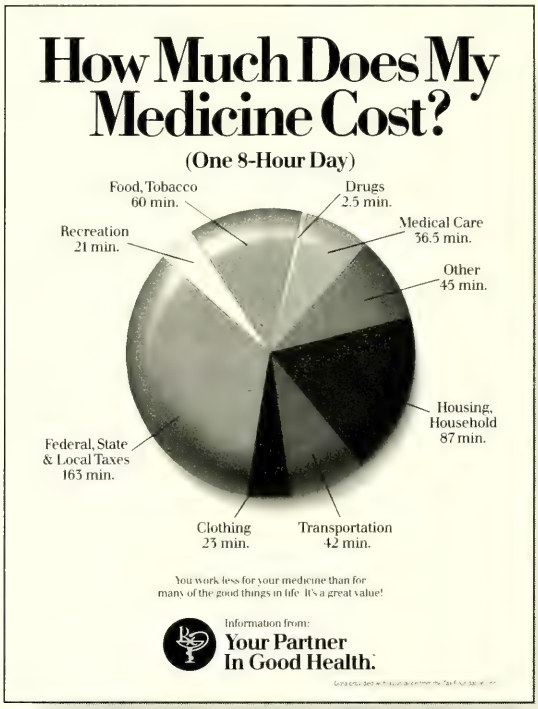
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PANIC DISORDER — AND ITS MANY COMPLICATIONS

By Arthur Rifkin, M.D.
Professor of Psychiatry
Mount Sinai Medical Center, New York

Horror movies throw people into terrifyingly surreal situations:

- Walls close in.
- People seem to leave their bodies.
- Victims get strangled by invisible hands.
- A corridor suddenly turns into a sealed trap.

To everyone's relief, such movies end. Theaters light up and return audiences to a kinder reality.

However, several million Americans are imprisoned in a reality that actually can resemble these films. They suffer from an anxiety condition known as *panic disorder* — the alarming affliction that recent National Institute of Mental Health studies find prompts its victims to seek mental health treatment at a higher rate than sufferers of any other mental health disorder.

Panic attacks — tidal waves of inexplicable fear — causes victims to feel faint, dizzy or unable to breathe. They may feel a strange sense of unreality and be convinced they're dying, losing their minds or losing control. Trembling and chest pains may seize them, along with the feeling of being choked. The attacks are powerful but brief. They may occur a number of times per day or as infrequently as once very month or two.

These episodes of irrational fear are dreadful enough in and of themselves. Making matters infinitely worse for victims, though, their effects extend far beyond the few minutes an attack actually lasts. They usually color a victim's entire existence.

Avoidance Behaviors and Phobias

Public places: The anticipation of panic attacks causes two-thirds or more panic sufferers to develop phobias about locations where they believe attacks may be triggered or help won't be available. The most common symptom is *agoraphobia*, literally meaning "fear of the marketplace," which is where women (the chief victims) principally used to go when they left the household. Agoraphobia can make an individual avoid all public places or crowds unless accompanied by someone who is trusted. Some victims stay at home for decades on end.

Closed places: Panic attack sufferers often shun automobiles, elevators, tunnels and other confining locations. Unsurprisingly, such avoidance behavior can be socially and occupationally crippling.

Sexual relations: Dr. Helen S. Kaplan of Cornell University Medical Center has uncovered many cases of extreme fear of sexual relations caused by previously undiagnosed panic disorder. Sexual arousal or particular sexual acts induce panic attacks, making these individuals avoid sex.

Mental, Behavioral and Physical Symptoms

Depression: Many panic disorder sufferers experience depression or related symptoms. According to a recent large study, between 25 and 42 percent of panic patients also endure periods of major depression. Some researchers say these patients do not experience clinical depression, but undergo severe demoralization because they can't lead a normal life. The practical effect is much the same.

Hypochondriasis: Hypochondriacs misinterpret insignificant body processes as signs of illness. The physical symptoms of anxiety (heart palpitations, trembling and so forth) and particularly the more terrifying symptoms of panic attacks prompt sufferers to see doctors about the physical illnesses they're sure they have. They often undergo repeated medical examinations. Doctors may stop taking their complaints seriously — and fail to diagnose and treat the *real* illness of panic disorder, as well as other afflictions. One National Institute of Mental Health study found that 58 percent of panic disorder patients also had unrecognized and previously undiagnosed medical illnesses.

Misinterpreting anxiety symptoms — mistaking them for signs of a heart attack or seizure — can actually trigger panic attacks. Furthermore, the anxiety of panic disorder patients may magnify the significance of other illness symptoms. For example, the first wheeze of a highly anxious asthma sufferer can stimulate

the fear that a life-ending attack is imminent, leading to repeated hospitalizations.

Alcohol & drug abuse: People with anxiety conditions such as panic disorder frequently abuse alcohol and unauthorized drugs to alleviate anxiety and to ward off panic attacks.

Disturbed sleep: Heightened awareness of anxiety's physical symptoms can cause people with panic disorder to develop insomnia. Daytime sleepiness is also common.

Exercise: Exercise increases the anxiety of about one-third of those who have panic attacks. They may not exercise for fear of precipitating attacks, though exercise has not been demonstrated to actually cause panic attacks.

Physical Problems

Breathing disorders: People who have panic attacks may be more likely than others to have a respiratory disorder called hyperventilation. They take excessively deep and rapid breaths that throw off the oxygen-carbon dioxide balance in the blood and cause feelings of faintness and other symptoms.

Cardiac abnormalities: Between one-fourth and one-half of panic disorder patients have a cardiac abnormality called "mitral valve prolapse." This failure of one of the heart valves to close properly can cause heart palpitations that may increase anxiety and trigger panic attacks.

Thyroid disorders: People subject to panic attacks are more likely than others to have antibodies in their blood that oppose their own thyroid hormones. The effects, if any, are not clear.

Chest pain: Many panic attack sufferers have chest pain similar to the angina caused by blocked coronary arteries. However, cardiologic testing reveals their arteries are normal. These chest pains can lead to costly cardiologic examinations and trips to hospital emergency rooms for suspected heart attacks.

Premature deaths: Studies suggest that men who have panic attacks are twice as likely as other men to die at a younger age, primarily from cardiovascular disease and suicide.

The Causes of Panic Attacks

What causes panic attacks is not entirely understood. They tend to run in families and have been solidly related to biological or genetic factors. They are more common among people who experience early traumatic loss, such as the death of a parent or loved one.

People who have spontaneous attacks can also have them triggered artificially by injections of a chemical called sodium lactate or by inhaling carbon dioxide. Other people rarely respond to these stimuli. This suggests that panic attack

continued on page 15

PRISONERS OF ANXIETY—
PANIC ATTACKS CAN DESTROY LIVES

People with unrecognized panic attacks often fear they have numerous illnesses, leading to many trips to the doctor.

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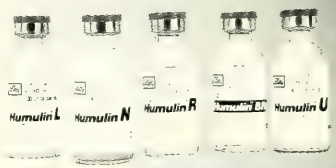

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PANIC DISORDER

Continued from page 13

victims react atypically to chemical changes in the body.

Caffeine: A study by Yale University psychiatrists found that panic victims are far more sensitive to the anxiety effects of caffeine than healthy subjects are. Indeed, caffeine produces panic-like symptoms in 71 percent of panic order patients. A few case reports implicate caffeine as the precipitating cause of panic and generalized anxiety disorders.

Good Treatments Available

The good news from psychiatry is that it's now possible to end the horror show of panic disorder. Several kinds of treatment have proven helpful.

Though no medication has received FDA approval for treating panic attacks, promising results have been achieved in recent years with three classes of medications. One is the monoamine oxidase inhibitors (MAOIs), ordinarily used to treat depression. The one used most often with panic attacks is called phenelzine. With MAOIs, certain foods should not be consumed, including cheese, beer, wine and cured meats. The tricyclic antidepressants are also quite effective, but have temporary side effects of hyperstimulation, such as rapid heartbeat and insomnia, in about one-fourth of patients. The MAOIs have a similar effect.

Extensive preliminiary trials in the treatment of panic attacks indicate that an anti-anxiety medication known as alprazolam, one of the benzodiazepines, can produce significant and rapid improvement. It does not cause the overstimulation associated with the tricyclics and MAOIs. Its most common side effect is sedation. Alprazolam also seems to ease the phobias that develop with panic attacks in a high proportion of cases. A recent study found that alprazolam treatment completely eliminated panic attacks in 85 percent of a group of 27 patients.

Psychotherapy may be particularly helpful for patients who have been relieved of panic attacks by drug treatment (or through spontaneous remission), but who are left with anticipatory anxiety and phobias. Such symptoms may continue despite the absence of panic attacks, because victims fear entering situations that they believe would provoke a panic attack. One psychotherapy technique changes people's thoughts about their symptoms. They no longer assume, for example, that a racing heart indicates a heart attack. This may help prevent anxiety from escalating into a panic attack. Other approaches include deep breathing and muscle relaxation exercises to control anxiety. Repeated exposure to the feared setting, perhaps in the company of a therapist, often helps to overcome such fears.

In summary, once the problem is identified, this particular medical "horror show" can have a very happy ending.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

It was a "Fun Day" at the home of Mrs. Hazel Robinson on Tuesday, March 8, 1988, as the members of the Charlotte Woman's Auxiliary met for their March meeting. Margaret Smith and Emma Love assisted Hazel in serving a delicious covered dish lunch. Members enjoyed touring through her home, which was called a museum by one member.

After lunch Mrs. Don B. Robinson (Margaret) conducted a business meeting. Mrs. Leslie Davis (Mary Lou) State President, brought greetings from the State Auxiliary. She reported on the Pharmaceutical Convention to be held in Asheville at the Grove Park Inn, May 18–21. State projects for this year are Mission Air and redecorating the ladies restroom at the Institute of Pharmacy. A Walk-a-Thon will be held at the convention to help raise funds for the state projects. There will be a sale of cross stitch kits of the North Carolina Pharmaceutical Association's Coat of Arms. Mrs. Jesse Oxendine (Jewell) announced that the April meeting would be a picnic at the home of Mrs. Charles Pender (Myrtle). After lunch the members will tour Wing Haven.

Members then enjoyed a "Chinese Auction", exchanging gifts with each other. Jewell then presented Mary Lou Davis a gift from the auxiliary. Hazel Robinson was presented a hostess gift.

Virginia Steele,
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CARDIOLOGISTS AND PSYCHIATRISTS FIND CHEST PAIN OFTEN ASSOCIATED WITH ANXIETY CONDITION CALLED PANIC DISORDER

Cardiologists have long noted that many patients with chest pain have apparently healthy hearts. A new study finds that more than half the people who have chest pain, but not angina (heart pain), may have the anxiety condition known as panic disorder.

Bernard D. Beitman, M.D., associate professor of psychiatry and director of area studies in psychotherapy, University of Missouri-Columbia Health Sciences Center, collaborated with colleagues in psychiatry and in cardiology to study 104 patients with atypical or nonanginal chest pain.

Typical angina is pain caused by insufficient oxygen supply to the heart muscle. This type of pain is located below the sternum (breast bone), evoked by exertion, and relieved by rest or nitroglycerin medication. In the patients studied, the pain lacked one or more of these characteristics. These individuals are generally found by cardiologists to have normal coronary arteries.

The patients were divided into two groups: 30 who had a history of coronary artery diseae and 74 who had no such history and whose tests indicated they were free of coronary artery disease. Of the 74 cardiologically normal persons, 43 were found by structured psychiatric interview and psychological questionnaires to be suffering from panic disorder.

Over an extended period, they had been experiencing panic attacks in which they were overwhelmed by terror and suffered a variety of symptoms which included trembling, faintness, perspiration, a feeling of choking and fear of having a heart attack. In addition, more than 50 percent (16 of 30) who had a history of coronary artery disease also suffered from panic disorder. Preliminary evidence suggests that people with typical angina seldom have panic disorder.

The cause of chest pain in association with panic disorder is not understood. But the authors advise clinicians to consider the possibility of panic disorder in patients with atypical or nonanginal chest pain, since panic disorder can be treated by specific medications with a high likelihood of success.

"Atypical or Nonanginal Chest Pain — Panic Disorder or Coronary Artery Disease?" Bernard D. Beitman, M.D., et al., Department of Psychiatry, University of Missouri, Columbia, Archives of Internal Medicine, Vol. 147, September 1987, pp. 1548-1552.

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CNS FACTSHEET: LOW BACK PAIN: *WHEN* TO EXERCISE — THE CONTROVERSY GROWS

"Live a healthy life," Hippocrates advised, "and you are not likely to fall ill, except through epidemic or accident. If you do fall ill, a proper regimen will give you the best chance of recovery." In ancient medical texts, "a proper regimen" had a place alongside such treatments as sulfur baths and oil of dolphin livers.

Probably no modern physician prescribes sulfur baths and dolphin liver oil, but a proper regimen, including exercise, is taking an honored place among the treatments to combat that age-old and excruciating condition, low back pain.

In addition to exercise, other treatments include heat, spinal manipulation, traction, medication, surgery and even injections of a meat tenderizer.

A Worldwide Affliction

Low back pain syndrome — a name encompassing a variety of causes — afflicts a major portion of the world's population: by one estimate, 80 percent of humankind. Usually, it disappears as spontaneously as it appears, and about 90 percent of its victims recover in three months or less.

However, about 4 percent of those affected suffer for six months or more. In other words, the condition becomes chronic. Unfortunately, only half the chronic victims are ever able to return to work.

In the United States, low back pain is the second leading cause of lost work time, after colds. It is near the top of the list of reasons for going to a doctor, and a recurrent problem for some 25 million Americans. One estimate places its annual cost at $23 billion.

Because its possible causes are so numerous, there is no such thing as a "standard" low back pain disorder. Moreover, it can be chronic yet have no discernible cause. And leg pain, which is sometimes called *sciatica,* may accompany low back pain, or even be the prevailing symptom.

The Major Causes: Muscle Weakness, Stiffness and Tension

Studies indicate that the underlying causes of most low back pain are stiff, tense and weakened muscles that go into painful spasm. They may exert pressure on nerves. Fully 83 percent of such pain was attributed to poor muscle condition, in a study conducted at Columbia-Presbyterian Medical Center in New York City.

Hans Kraus, M.D., author of the book "The Cause, Prevention and Treatment of Backache, Stress and Tension," treated President John F. Kennedy's low back pain. Dr. Kraus believes that weak muscles are often overlooked as a cause. A pioneer *physiatrist* — a physician specializing in physical medicine — he sees the strength and flexibility of key posture muscles as essential to maintaining a healthy back.

"There are four different sources of muscle pain," says Dr. Kraus. "One is spasm: The patient cannot move and goes to bed. A second is muscle tension: The muscles get tight, and beyond a certain point, they hurt. The third is muscle deficiency: Weak, stiff muscles produce pain. Pregnant women are among those who may suffer from this. The fourth cause is *trigger points:* little areas of degenerated muscle tissue."

Dr. Kraus, whose practice is in New York City, believes that if muscles are strong and supple, they can prevent low back pain and they are less likely to spasm. Modern-day living, obesity and aging all contribute toward weakening muscles of the lower back and of the abdomen, which work in tandem.

Muscles are not the only source of low back pain. The Columbia-Presbyterian study also showed that low back pain problems are caused by mechanical difficulties such as displacement of vertebrae. Even a difference in leg lengths can produce low back pain, another study suggests.

The Notorious Herniated Disc

One well-known cause of low back pain is the notorious herniated disc. The disc is a leather-like package containing a gelatinous material. When a disc ruptures, the material leaks out and presses on the spinal nerve roots.

"If you squeeze a nerve, as happens with a herniated disc, the pressure produces an electrical discharge that results in pain," says Hubert L. Rosomoff, M.D., medical director of the Comprehensive Pain Center and professor and chairman of neurological surgery at the University of Miami School of Medicine. "It's like an electrical shock that runs down the leg and disappears. Then the nerve is silent. The

subsequent sensation is numbness rather than further pain."

"In contrast, low back pain originates primarily from injured tissues in muscles, tendons, ligaments and joints around the spine and its support structures. We find these are the causes more than 90 percent of the time," he adds.

Modern diagnostic techniques range from simple physical examinations to X-rays, CT scans (computed tomography, yielding three-dimensional X-ray images) and myelograms (X-rays made after opaque dye is injected into the spinal canal to outline its contents). CT is now the primary tool for evaluating disc herniation; myelography, for identifying spinal cord or nerve root damage or tumors that invade the spinal column.

The Standard Treatments

Some treatments for low back pain handed down through the ages still endure. Heat, for example, as well as spinal manipulation or massage have been applied since the days of Hippocrates.

Additional treatments intended to help cure low back pain are immobilization and bed rest. These often are supplemented with simple non-narcotic analgesics, the nonsteroidal, anti-inflammatory drugs. This class of pain relievers is preferred to opioid analgesics which are habit-forming. At times, analgesics are prescribed in conjunction with a muscle relaxant.

When strict bed rest isn't possible, surgical corsets can support the spine and divert some of the body's load to the abdominal muscles.

If low back pain is caused by a mechanical change in the spine, a joint or a disc, and nerve roots don't seem to be involved, manipulation of the spine is sometimes prescribed. But some physicians fear that manipulation may increase the derangement, especially in cases complicated by sciatica or nerve root damage.

When a nerve root is involved and pain is so severe that physiotherapy yields little relief, physicians may resort to traction and/or spinal injections of steroids to reduce the inflammation and local anesthetics to lessen the pain.

Surgery and "Tenderizing"

Beyond this point, the next step may be spinal surgery. Surgery is primarily used when there is definite evidence — X-ray or CT scan findings — that a herniated disc or other anatomical abnormality is the cause of the pain. Because current imaging methods are more reliable in diagnosing disc herniation, arthritic changes, tumors or other anatomical conditions, patient selection for surgery has greatly improved, as has its outcome.

Recently, a procedure called *chemonucleolysis* has become an option for treating herniated disc. It involves injecting a meat tenderizing enzyme, chymopapain (Chymodiactin, Smith) into a disc, literally to tenderize it. The success rate isn't as great as that of surgery (65 percent versus 80 percent), but proponents say chemonucleolysis poses less shock to the body, and patients return to their normal lives more quickly. Other experts fear the chemical could damage spinal nerves.

The "Proper Regimen" Controversy

A growing school of thought rejects narcotics, surgery and even immmobilization in most cases and suggests instead a program somewhat akin to the "proper regimen" advocated by Hippocrates. It's built around exercise — aimed at relaxing tense muscles, strengthening weak muscles and stretching tight muscles. Adherents tailor home programs of exercise to meet each patient's individual needs.

While general agreement exists on the preventive benefits of exercise, controversy surrounds the question of whether to exercise when in pain. Many physicians caution patients not to exercise when in pain for fear of further irritating the inflamed areas.

"I think the old adage 'Don't exercise against pain' is wrong," says Dr. Rosomoff. In his view, bed rest, back braces and traction only weaken muscles and aggravate the condition. "Our procedure is to identify the particular muscles involved, then recondition them through exercise. And we find that exercise can actually decrease pain."

Willibald Nagler, M.C., physciatrist-in-chief at New York Hospital-Cornell Medical Center in New York City, says that among 97 patients admitted for spinal stenosis (a narrowing of the space within the spinal column, which puts pressure on spinal nerves) as many improved with good exercise as with surgery. A patient with low back pain caused by severe abnormalities has the same chance of improving as someone with less severe abnormalities if a regimen of exercise is followed. Dr. Nagler

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CDS FACTSHEET

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concludes that relatively few patients actually require surgery.

Preventive Education Should Start in Elementary School

It's not likely that the enigma of low back pain will soon be resolved. Considering the architecture of the back and spine, it's more likely that it will always plague human beings. Despite physicians' efforts to understand and treat low back pain, determining why an individual with acute back pain progresses into severe and chronic pain remains an unsolved question. However, relief and prevention are increasingly realistic possibilities, even probabilities.

Most back problems could be averted, according to Dr. Rosomoff, if people understood body mechanics — learning how to lift, how to bend — and knew how to condition their muscles through stretching.

These subjects should be taught in elementary school. "They're certainly more important than learning to high jump," he adds.

Additional Readings

1. Sheehan, N.J. and Mathews, J.A., "Options for Treating Low Back Pain," *Drug Therapy,* March 1984, p. 154.

2. Sobel, Dava, "Little Known Medical Field Treats Pain and Disability," Science Times Section, *New York Times,* April 16, 1985.

3. Cailliet, Rene, *Low Back Pain Syndrome,* 3d ed., F.A. Davis, Philadelphia, 1981.

4. "Low Back Pain: What role for CT?" *Patient Care,* May 15, 1985, p. 22.

5. Kraus, Hans, M.D., *The Cause, Prevention and Treatment of Backache, Stress and Tension,* Simon and Schuster, New York, 1965.

FINGER-STICK BLOOD TEST MEASURES CHOLESTEROL

Within three minutes, new portable devices can analyze a single drop of blood from a pricked finger and provide an assessment of an individual's cholesterol level.

A recent study using these finger-stick devices has shown that they come within 2 to 4 percent of the reading obtained by traditional laboratory procedures, according to Antonio Gotto, M.D., chairman of the department of internal medicine, Baylor College of Medicine and Methodist Hospital, Houston, Tex.

Dr. Gotto, who also chaired the National Conference on Cholesterol Screening said, "These preliminary results are encouraging and lead us to believe that it is practical to do rapid mass cholesterol screening."

Gary Horowitz, M.D., assistant professor of pathology, Harvard Medical School, and director of clinical chemistry, Beth Israel Hospital, Boston, told *Diabetes & Heart Facts* that, although he had limited experience with these finger-stick devices, he thought they provided reasonably good measurements of cholesterol levels. However, he stressed obtaining two measurements, because "depending on the time of day, what you eat or drink and the measuring tool, your cholesterol level can vary by as much as 10 percent."

Dr. Gotto agreed with Dr. Horowitz and added that although cholesterol control is important for everyone, it is especially so for those with diabetes since they are already at higher risk for heart disease.

"Cholesterol Screening Program Finds 48% Physician Follow-Up Contact," FDC Reports, June 1, 1987, p. T&G5; Interview with Antonio Gotto, M.D., Department of Internal Medicine, Baylor College of Medicine and Methodist Hospital, Houston, Tex.; Interview with Gary Horowitz, M.D., Department of Pathology, Harvard Medical School, and Department of Clinical Chemistry, Beth Israel Hospital, Boston, July 17, 1987.

LETTERS TO THE EDITOR

To: Executive Directors
State Pharmacy Associations

From: Doris E. Denney
President
Idaho Pharmaceutical Association

Topic: PCS Recap System

Point of sale terminals are becoming more and more familiar on pharmacy counters as third party payors demand greater flexibility and assurance of eligibility of a prescription drug plan card holder.

Idaho is the third state in which PCS has placed the Recap Box, having been preceeded by Arizona (1987) and California (Jan. 1988)

PCS has marketed Recap as a benefit to the pharmacy with lower rejection rates and also higher turn-around time for payment of claims. Idaho pharmacists had a relatively low rejection rate and no complaints with a 2 week turn around time. But, the letter sent to each pharmacy did not give much room for non-acceptance of such a plan.

Idaho has no problem in acceptance of new technology. What we do have problems with are the lack of computer capability for 85% of the pharmacy computers within the state which makes for a double entry for each PCS Recap claim and for having to pay for the privilege of the use of the system. When PCS was asked if the insurance companies had been asked to bear the cost of the Recap System, the response was a negative one. Recap is a greater benefit to the insurance companies such as Blue Cross for it allows them greater flexibility in prescription drug plans and instant denial of a claim for a person who is not covered.

These benefits were presented to the insurance carriers last year — but no mention of additional cost for the individual pharmacy or that the technology is not ready. Pharmacies computerized to allow for more efficient operations. Recap takes us several steps backwards.

There have been problems with phone systems (not all compatible), getting through to PCS, doing double entry of a claim at peak times, and the list goes on.

The current PCS system, either manual or computerized, gives the pharmacy a paper copy of the claim submitted for a good audit trail. This allows easy reconciliation of a remittance report. With Recap, a pharmacy is left with a reference number and a prescription number and patient's name in a log book. This does not make reconciliation an easy matter.

When Recap comes to your state, we suggest you ask the following questions:

— Why are insurance carriers not asked to bear the additional cost of processing a claim.

— Why are employers not made responsible for the return of a PCS card when an employee leaves that place of business.

— Are the computer systems in your state ready for PCS? If not, has PCS given the necessary information to the software vendors?

PCS claims there are no problems with the Recap System. I would advise that you talk to pharmacists in the three states that currently have Recap. You may find a difference of opinion.

If we can be of any help to you or if you have further questions, please contact ISPA.

Jo An Condie,
Executive Director (208) 376-2273

Doris Denney,
President (208) 466-7869

Market researcher Kline & Co. study found that self-medication with over-the-counter drugs saved the U.S. economy $23.8 billion in lost time from work, visits to doctors, prescriptions drugs, insurance services and home remedies. By the year 2000, savings are expected to be $72.8 billion!

American Academy of Ophthalmology and 4 drug makers have developed a color coding standard to make eye drop packages more distinctive to avoid patient confusion. A red package will indicate mydreatics, green for miotics, yellow and/or blue for beta blockers, brown and/or tan for antibiotics and gray for non-steroidal antiinflammatory drugs.

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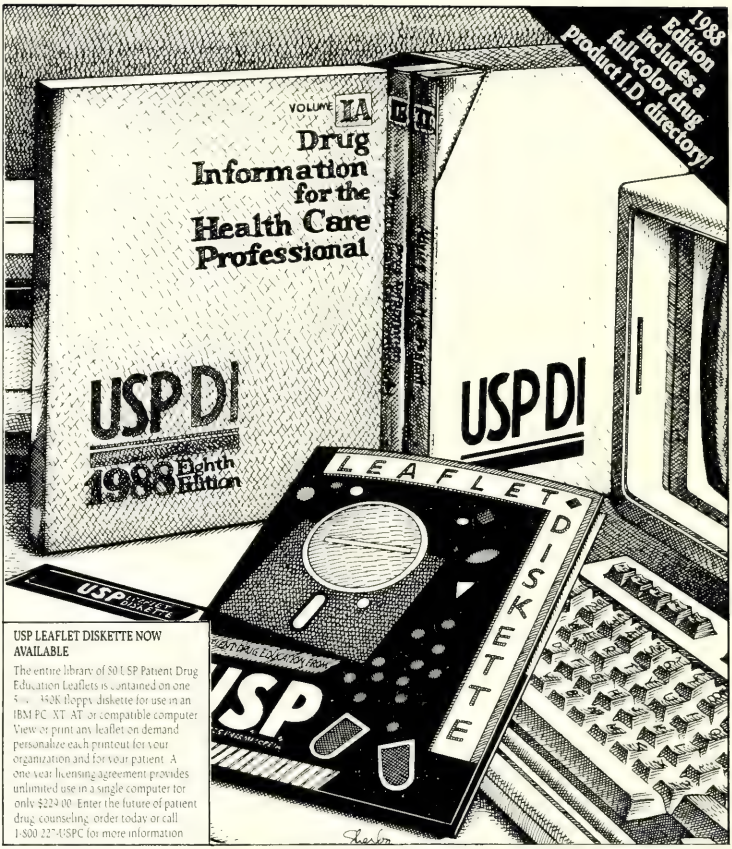

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LOCAL NEWS

CHOWAN HOSPITAL PHARMACIST, STAFF HONORED

Chowan Hospital's Director of Pharmacy Wallace E. Nelson, R.Ph., and his staff have been selected from approximately 150 other hospital pharmacy staffs to receive the Roerig Division of Pfizer's "Hospital of the Semester Award." Chowan is the first North Carolina pharmacy to receive recognition in a division that includes all of Virginia, West Virginia, and Northeastern North Carolina.

The award was presented to Nelson in a surprise ceremony on March 15, with Chowan Hospital Director Marvin A. Bryan and Assistant Director Barbara Cale present. Gus Williamson, District Manager for Roerig, a division of Pfizer Pharmaceuticals, presented the engraved plaque to Nelson, "in recognition of the pharmacy's ongoing efforts in the fields of economy and education for the patients and staff of Chowan Hospital."

"We are proud of the fine job Wallace and his staff do in keeping our hospital pharmacy efficient and second-to-none in modern technology," said Bryan. "We are especially pleased that these efforts have brought them such well-deserved honors."

Nelson, who was nominated by Sales Representative Terry Hardison, has directed the hospital pharmacy since 1982, having served as staff pharmacist for four years prior to that. A graduate of the University of North Carolina at Chapel Hill, Nelson is a Hertford native and is active in area and state civic and professional organizations. Most recently, he was installed as a member of the Board of Directors of the North Carolina Society of Hospital Pharmacists.

OBITUARIES

Vance Graham McGugan

Vance G. McGugan, Mocksville, died unexpectedly Sunday, April 17, 1988. He was 63 years old. A native of Bennettsville, S.C., McGugan was graduated from Campbell University in 1947 and the UNC School of Pharmacy in 1954. The majority of his professional life was as an employee and manager of the Hall Drug Company in Mocksville. He was a US Navy veteran of World War II and the Korean War

George Edwin Royall, Sr.

George E. Royall, Sr., Elkin, died Saturday November 21, 1987 at the age of 89. Owner of Royall Drug Company since 1924, he was active in civic affairs, serving as Mayor of Elkin and President of the N.C. Merchants Association. His son George E. Royall, Jr., is also a pharmacist

Donald Hines Bissett

Don H. Bissett, Lumberton, died Saturday, December 26, 1987 at Southeastern General hospital after a long illness. He was 66 years old. Bissett was a South Carolina native, a veteran of World War II where he served as a pilot, and received a degree in commerce from UNC in 1949and a degree in Pharmacy in 1954. He was owner of several pharmacies including Johnson Drug Center of Lumberton which he operated from 1967 until 1979.

James Howard Millard

James H. Millard, Charlotte, died suddenly Saturday, April 2, 1988 at Charlotte Memorial Hospital. A 1943 graduate of the University of Pittsburg School of Pharmacy, Millard was 66 years old. He had reciprocated to North Carolina in 1976 from Pennsylvania, where he had owned two pharmacies. He had been employed by Eckerd Drugs in Charlotte

Clarence LeRoy Swearngan

Clarence L. Swearnagan, Charlotte, died Wednesday, November 18, 1987 at the age of 59. A native of Charlotte, he had worked in several Mecklenburg and Gaston county pharmacies since he moved from Clinton in 1952. He served as president of the Mecklenburg Pharmaceutical Society in 1960. He was graduated from UNC School of Pharmacy in 1951 and served in the U.S. Army from 1946 to 1948.

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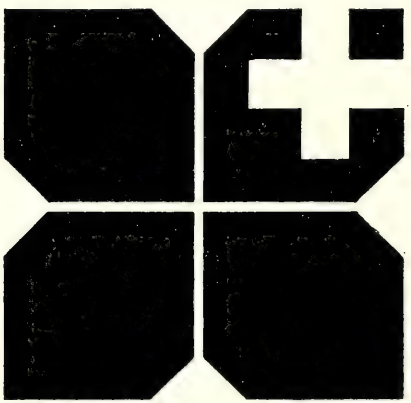

CHARLESTON, S.C.
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PHARMACY COMPUTERIZATION: BEWARE OF PROBLEMS

James R. Talley, M.S.
School of Pharmacy
Northeast Louisiana University
Monroe, Louisiana

You have finally decided to seriously consider computerizing your pharmacy. For the past few years, you have noticed that other pharmacies have installed computer systems. At first you thought computers were a "fad" and were not really needed to operate your pharmacy. Recently, you have discussed various aspects of computerizing your pharmacy with other pharmacists, considered advantages and disadvantages, and have realized that computerization is necessary for your pharmacy operations.

Computerization Problems

There are a number of advantages for your pharmacy operations. However, there are also a number of problems which may emerge — often unanticipated. Therefore, be aware of major problems before you initiate computerization. Your pharmacy operates with the same business principles as any other business. Any type of change will upset your pharmacy operations. Computerization probably will result in major change and therefore may be extremely upsetting to your pharmacy operations. This disruption of your pharmacy will tend to be magnified with the conversion from manual to automated procedures. Your pharmacy will undergo a critical transition phase. This transition should be well planned to eliminate major problems prior to the actual implementation of computerization.

The first problem may be your employees, they may become hostile and reject computerization. It is important to keep your employees well informed. You should develop a detailed plan of impelementation which includes employee training and procedures for testing the system in your pharmacy. This should also include an implementation schedule for converting (inputting) data into the computer and a final transition deadline. It is important to realize that your employees may not share your enthusiasm and visionary benefits of computerization. A number of your employees may develop "cyberphobia" a term which means "fear of computers." This may account for employees' negative response to major changes in your pharmacy operating procedures. Remember that your employees are familiar with the "old system" and may prefer to use it, even after you computerize the pharmacy.

Another problem to be aware of is that the vendor probably will not implement the system for you. Even if the vendor makes claims of a "turnkey installation," be aware of unforeseen problems. Remember that vendors usually are in the business of selling hardware and software and not in the business of converting your pharmacy operations to computer implementation. However, vendor assistance may be extremely valuable in introducing the system to employees and providing assistance in implementation.

You should resist the temptation to have special software customized for your pharmacy. Custom software can be extremely expensive and probably will not be cost-effective. Find a system that provides at least 80% of the features you desire and resist the temptation to achieve perfection. Also remember that even if a system functions flawlessly in another pharmacy, it may have initial problems in your pharmacy. So, be aware and plan for glitches. It will be prudent for you to perform a comprehensive test before fully implementing the system.

Computerization Questions

Once you have decided to purchase a computer system there are a number of important questions which must be answered. A number of these questions require difficult decisions in a field that is confusing and continually changing. Your decision to purchase a computer represents a major investment in your pharmacy. It requires a great deal of time to become knowledgeable about computer equipment. Unfortunately, you probably do not have the time to develop this expertise. If your pharmacy needs a computer, then go ahead and take the plunge. There probably is a computer system available that suits

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IS MENTAL HEALTH CARE TOO EXPENSIVE FOR INSURORS? STUDY FINDS IT REDUCES TOTAL MEDICAL COSTS

A major study of federal employees and their families finds that treatment of mental and emotional disorders significantly reduces total medical care costs. The savings stem primarily from a drop in the total health services patients use after initiating therapy for the psychiatric disorder.

Harold D. Holder, Ph.D., director of the Prevention Research Center in Berkeley, Calif., and James O. Blose, M.P.P., senior analyst at the Human Ecology Institute in Chapel Hill, N.C., compared 26,915 families in which at least one member received mental health treatment with 16,468 similar families in which no member had received such treatment. All were enrolled in an Aetna Life and Casualty Company health insurance program.

Prior to mental health treatment, the health care costs for individuals who eventually sought such treatment were considerably higher than those of the comparison group. These individuals increased their use of other health services for as many as three years before beginning treatment, with health care costs peaking at $493 per month (in January 1980 dollars) during the six months prior to seeking mental health care.

Once mental health treatment began, total monthly health costs fell — in one subgroup from $242 in the year before treatment, to $214 in the first year after treatment began, to $162 in the following year. The costs continued to decline during the third year following treatment. Furthermore, the health care costs for family members of mental health patients were also decreased after treatment.

The authors conclude that "a decrease in total health care costs can be expected following the start of mental health treatment — even when the costs of this treatment are included." This study suppports other research that has found the use of nonpsychiatric medical services to decrease after psychotherapy begins. Psychological intervention has also been shown to reduce time spent in the hospital when recovering from illness or surgery, thereby reducing medical costs.

"Changes in Health Care Costs and Utilization Associated With Mental Health Treatment," Harold D. Holder, Ph.D., Prevention Research Center and School of Public Health, University of California, Berkeley, and James O. Blose, M.P.P., Human Ecology Institute, Chapel Hill, N.C., Hospital and Community Psychiatry, Vol. 38:10, October 1987, pp. 1071-1075.

COMPUTERIZATION

Continued from page 27

your needs. Don't delay because of new and improved models — computer systems will constantly be changing and evolving. Hardware and software usually can be upgraded to match capabilities of more current models.

A major consideration in purchasing a computer system is assessing your needs. You probably will want to use your computer system for a number of purposes. You should establish a priority list of your needs and find a software package that will best meet these needs. The next critical step is to decide on a computer that will function with your chosen software. Hardware should be chosen for its ability to run your software. Fortunately, there probably are a number of computers that will be compatible with your software. Once the compatibility question has been solved, you will need to consider aspects of cost, service, appearance, and features.

Summary

Select a computer system that meets your needs. Consider products with an established reputation that will be supported and maintained. Select a vendor that will provide present and future assistance. If possible, purchase an entire system from the same vendor so that all the components will be compatible and fully supported. Continually remind yourself that computerization will not be as easy as it appears. However, you should be successful if you select a good system, develop proper planning, and initiate prudent implementation.

DRUG ABUSE INVOLVING IPECAC

Pharmacists recognize it is their primary responsibility to help patients. Daily pharmacists strive to assist patients by dispensing medications and providing drug information. What happens when pharmacists unknowingly supply patients with a drug not for their benefit but rather their harm?

This is occurring now in North Carolina as retail pharmacies allow the open sale of Syrup of Ipecac to a small patient group, eating disorders, whose intent is to abuse the drug. This group of predominantly young females purchase Syrup of Ipecac with the intent of abusing this drug for purging purposes.

Adverse effects associated with chronic vomiting include metabolic abnormalities, dental abnormalities, esophagitis, gastric reflux, and aspiration pneumonitis. Chronic toxicity of Ipecac involves myopathy and/or cardiotoxicity. Cardiotoxicity associated with chronic use has been fatal. Cardiotoxicity presents as supraventricular tachycardia, premature contractions, decreased contractility, and cardiac arrest. Myopathy with chronic abuse includes generalized weakness, dysphagia, muscle aching and difficulty in performing tasks requiring muscular activity.

In Charlotte, an anorexic/bulemic adolescent recently died from a heart atack. The probable cause of the heart atttack was chronic abuse of Syrup of Ipecac. In Chapel Hill, an undergraduate anorexic/bulemic patient reports she can easily purchase one to six bottles of Ipecac from several pharmacies. She often tells the pharmacist she is interested in obtaining bottles for "babysitting kits" to distribute to families with young children.

What can we as health professionals do to prevent this open sale of Syrup of Ipecac to eating disorders patients for misuse yet allow its sale for poison prevention?

1. Place Syrup of Ipecac behind the pharmacy counter for pharmacist distribution only.
2. Limit the sale of Syrup of Ipecac to one 15 ml bottle at a time.
3. Record all sales in a poison log.
4. Inform all pharmacists through newsletters of this misuse by eating disorders.

March, 1988

Your support and immediate action to prevent this abuse from continuing further is greatly appreciated.

Lee Y. Rogers, RPh, MS
Director of Pharmacy
Charter Pines Hospital
Charlotte

Jerald P. Lane, M.D.
Medical Director of Eating Disorders Program

Jackie White, RN
Coordinator of Eating Disorder Program

IPECAC RECALL

The FDA has initiated a nationwide recall of one-ounce bottles of Humco brand **IPECAC SYRUP** because some bottles contained highly toxic eucalyptus oil instead of ipecac syrup.

The FDA warned that eucalyptus oil can be extremely dangerous if ingested, causing epigastric burning, nausea, vomiting, convulsions, coma, and death. (As little as a teaspoon of the oil can be fatal.) Immediate medical attention should be sought if eucalyptus oil is swallowed.

This is the second recall issued by the manufacturer, Humco Laboratory of Texarkana, Texas, resulting from a labeling mix-up during the month of April. The first recall was issued when one-ounce amber bottles of Brite life Iodides Tincture, a decolorized iodine, were mislabeled as Brite Life Ipecac Syrup.

Pharmacists are urged to alert customers to check their household medicines for these products and reinforce the necessity to return them to their place of purchase.

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Classified advertising (single issue insertion) 25 cents a word with a minimum charge of $5.00 per insertion. Payment to accompany order.

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HOSPITAL POSITIONS OPEN

PHARMACIST WANTED: Hospital position available at Iredell Memorial Hospital located in Statesville, NC. Progressive department with computerized unit dose and IV admixture services. Pharmacists participate in therapeutic drug monitoring. Competitive salary. Contact: Beverly Wilkinson, Director of Personnel, or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

STAFF PHARMACIST WANTED: Position at Kings Mountain Hospital. Modern 102-bed facility with computerized unit dosage. Hospital experience preferred but not necessary. Will consider a May graduate. Contact Jerry McKee at (704) 739-3601 Ext. 472.

The Department of Pharmacy Services at Sampson County Memorial Hospital has opportunities available for hospital pharmacy practice. This 145 bed JCAH approved hospital is located within 1 hour drive of the coast. Good working conditions with Nursing and Medical Staff. Excellent starting salary, plus comprehensive benefit package. Activities include complete computerization, unit dose, IV admixture, patient profile and inventory control. Patient care services include: antibiotic monitoring, TPN, Aminoglycoside dosing and support for continuing education. Contact: Patricia Britt, director, Personnel or Jenny Strickland, Director Pharmacy at (919) 592-8511.

MOORE REGIONAL HOSPITAL, a 316-bed, acute care facility has an opening for a staff pharmacist. This pharmacy offers unit dose, IV Admixture, chemotherapy, support for C.E. education, patient profile, and a mobile medication service. Moore Regional Hospital is located in Pinehurst, a beautiful part of the Sandhills. Excellent starting salary, on-site Day Care, plus comprehensive benefit package. Contact Cornelia Perry, Vice President Human Resources, (919) 295-7808 or Robert Beddingfield, Director of Pharmacy, (919) 295-7112 or send resume to: Moore Regional Hospital, Human Resources, P.O. Box 3000, Pinehurst, NC 28374. EOE.

DIRECTOR OF PHARMACY: Pungo District Hospital in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Pharmacy. Salary negotiable and commensurate with experience. Interested parties should contact the administration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

STAFF PHARMACIST WANTED: Staff Pharmacist needed for Highsmith Rainey Hospital, Fayetteville. Contact Sam Hauser, (919) 483-7400, Ext. 172.

PHARMACIST WANTED: Director of Pharmacy for 64-bed hospital in Southeastern North Carolina. Excellent hours, salary negotiable, and good fringe benefits. Contact Tom Smart at (919) 582-1776.

RETAIL POSITIONS OPEN

PHARMACIST: Greensboro area. Ambitious pharmacist-manager for high-volume multi-service Clinic Pharmacy. GOOD HOURS, GOOD BASE SALARY, GOOD BONUS. Call and/or send resume to: Lewis Rieger, ENCORE PHARMACY, INC. P.O. Box 23791, Harahan, Louisiana 70183 (504) 733-6031.

PHARMACIST WANTED: We are seeking an ambitious, and professional career-minded individual for a pharmacist position

in Greensboro, High Point and Winston-Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure Pharmacy setting". If interested call Lew Thompson 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke, VA 24038. EOE.

PHARMACISTS WANTED: Drug Emporium, Greensboro, NC now hiring pharmacists. Excellent starting salary. Complete benefit package, plus bonuses included. Call Kent Huffman for details at (919) 282-3993.

PHARMACIST WANTED: Excellent opportunity to work in independent professional pharmacy (80% Rx) in large medical complex in Sandhills. No nights or Sundays. Excellent salary & benefits. Ownership potential. Reply to: Pharmacist, Box 1119, Pinehurst, NC 28374. (919) 295-2222 (day or night).

PHARMACIST WANTED: For retail and consultant practice. Excellent salary and benefits. Located in Western, NC. Call Bill Morris at (704) 456-8607.

PHARMACISTS WANTED: Pharmacist positions available with ownership privileges. Excellent salary and benefits. Contact Tim Walker at Walker's Pharmacy at (919) 635-9741.

PHARMACISTS WANTED: Farmco Drug Centers have present positions available in Rocky Mount, Elizabeth City and Goldsboro North Carolina. For more information call collect Buddy Liebowitz at (804) 858-6063.

PHARMACIST-MANAGER NEEDED. Small, historic town in Eastern North Carolina. Great hours and benefits. Contact Bill Thorn, 1510 Main Street, Tarboro, NC 27886 (919) 823-3849.

PHARMACIST WANTED: Pharmacist position available at Reynolds Health Center Pharmacy in Winston-Salem. Pharmacy hours 8-5, Monday through Friday. Salary negotiable. Excellent benefits. Contact Forsyth County Personnel at (919) 727-2851 or Janet Foster, Pharmacy Director at (919) 727-8264, for further information.

PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

RELIEF

NEED A PHARMACIST: Pharmacist is looking for full-time or relief work in Charlotte area. Call after 7:30 p.m. (704) 553-1924.

RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call (919) 481-1272 evenings.

NEED A PHARMACIST?: Pharmacist is interested in becoming a permanent floater for corporation or hospital. Has 20+ years of experience. Licensed in NC and SC and will have VA license in June. Will do relief work for retail/hospital position. If you are in need of such a person please contact: Box CBD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

FIXTURES

Rx SHELVING FOR SALE. Used metal Rx shelving — approx. 50 ft. — $650.00. Call or write: Roland Thomas, 3555 Tryclan Drive, Charlotte, NC 28217 (704) 525-5300.

PHARMACIES FOR SALE

PHARMACY FOR SALE: Owner wants to retire. Store 12 miles from Charlotte. Sales $225,000 annually. Inventory $45,000. Reply to Box ZYX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Small drug store, no fountain. Doing about $100,000 yearly, approximately 80% Rx business. Rent for building $200 monthly. Will sell for $30,000. If interested, please call (919) 638-2455.

Continued on page 32

CLASSIFIEDS

Continued from page31

PROFESSIONAL PHARMACIES: Several small prescription-oriented pharmacies are currently for individual ownership in North Carolina. These opportunities provide availablethe vehicle to practice pharmacy the way you were taught, while offering an attractive income and more time to be with your family. In some of these cases, financing is also available to qualified candidates. For more information write: Jan Patrick, 10121 Paget Drive., St. Louis MO 63132.

PHARMACY FOR SALE: Store location approximately 25 miles from Charlotte. Sales over $1,000,000 annually. Reply to Box VTC, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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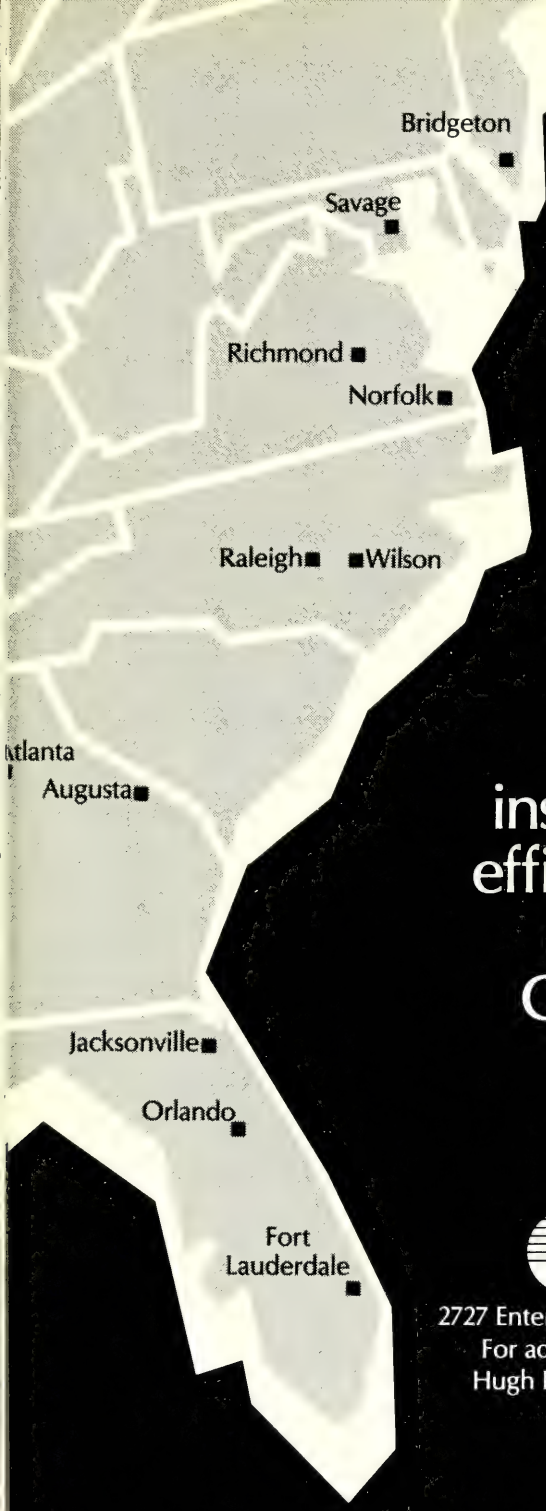

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Ralph P. Rogers, Jr. right and Eugene G. Brown, III, recipient of the 10th Annual Ralph Peele Rogers Memorial Award. Story on page 5.

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Rogers Family, presenters of the Ralph Peele Rogers Memorial Award. Left to right: Mr. and Mrs. J. R. Millar, Ralph P. Rogers, Jr., and Mr. and Mrs. J. Clinton Rogers.

Mr. and Mrs. Eugene G. Brown, Jr. and son Gene, award recipient

GENE BROWN RECEIVES ROGERS AWARD

Eugene G. Brown, III, fourth year pharmacy student at UNC, received the Ralph Peele Rogers Memorial Award for excellence in Pharmacy Administration at a dinner given in his honor April 22.

Held at the Carolina Inn in Chapel Hill, the program was the tenth annual recognition of an undergraduate who has demonstrated interest in community pharmacy and excellence in pharmacy administration. Judging and evaluation is done by the faculty in the UNC School of Pharmacy Pharmacy Administration Division, chaired by Jean Paul Gagnon.

Students are chosen on class participation, classroom work and in the final judging, on an essay written on pharmacy. Mr. Brown's essay, "My Future in Community Pharmacy," will appear in the June issue of ***The Carolina Journal of Pharmacy.***

Master of Ceremonies for the evening was Al Mebane, Executive Director, NCPhA. Associate Dean of the School of Pharmacy, George H. Cocolas, delivered the invocation. Ralph P. Rogers, Jr. of Durham, presented the cash award on behalf of his brother, Joseph Clinton Rogers, Durham, and his sister, Mrs. J. R. Millar, Winston Salem, as well as himself, in memory of their father. Ralph Peel Rogers Sr. was an outstanding pharmacist businessman who served as president of the North Carolina Pharmaceutical Association in 1941-1942.

Mr. Rogers told of growing up in his father's drug store, Roger's Drug Store in Durham, which the senior Rogers operated for fifty years.

Division head Gagnon spoke of the selection process, and the quantity and quality of the students who were considered. Gagnon, who is leaving UNC to become Director of Pharmacy Relations for Marion Labs in Kansas City, was complimentary about the work and interest in community pharmacy Mr. Brown had exhibited.

Among those attending the dinner were Brown's parents, Gayle and Eugene G. Brown, Jr., of Dublin. The elder Brown is a 1966 graduate of the UNC School of Pharmacy and operates Dublin Drug Company.

Previous recipients of the award include Scott Dinkins, 1978; Jo Travis, 1979; Susan Speir, 1980; Kent Tapscott, 1982; Sherri Furr, 1983; Melanie Spenser, 1984; Steve Ruddy, 1985; Beverly Helton, 1986; Melinda Steele and Lori Wilkins, 1987.

Left to right: Gayle Brown, Gene Brown, III, Gene Brown, Jr., Al Mebane and Ralph Rogers, Jr.

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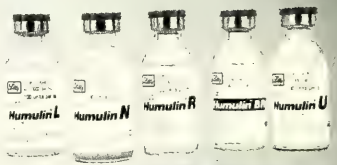

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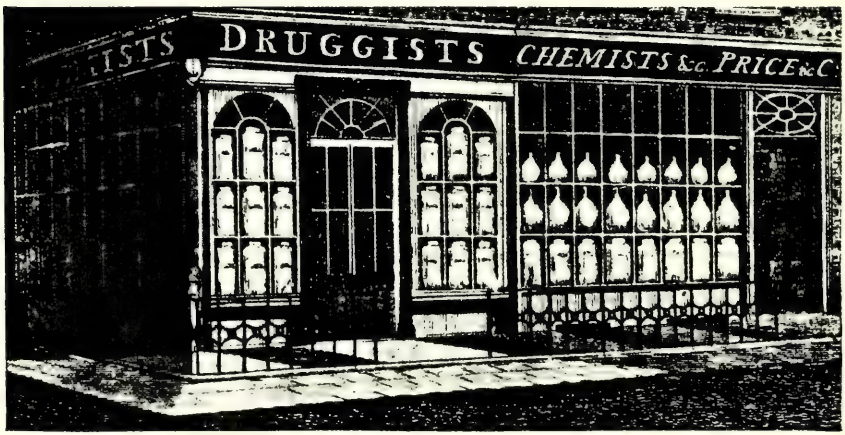

CORRESPONDENCE COURSE

ADVISING CONSUMERS ON CHEMICAL INSECT REPELLENTS

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University, Ada, OH
and
J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to:

1. discuss theories on factors that attract and repel insects from humans;
2. outline factors that contribute to increasing the efficacy of chemical insect repellents.

Objectives

At the conclusion of this lesson, the successful participant should be able to:

1. list the major factors that enhance chemical insect repellent activity;
2. differentiate between the different chemical insect repellent products;
3. explain the meaning of the FDA restriction on the use of thiamine as an oral insect repellent;
4. state the mechanism of action of insect repellents;
5. list the major adverse effects associated with systemic absorption of DEET.

Man has battled insects since earliest recorded history. Besides being very annoying, insects carry many diseases which are harmful to humans.

Insecticides have been widely used to help control pests, but their actions are limited. While a number of insect species have been almost totally eliminated, many have survived and are resistant to the chemicals intended to control them.

Chemical repellents offer an alternate means of reducing the incidence of insect bites and stings. Available repellents are active against common disease-carrying pests such as mosquitoes and ticks. They are used more to alleviate the annoyance of insects rather than to prevent disease.

Repellents are more effective against biting insects such as mosquitoes than against the stinging insects such as bees, wasps, and hornets. These stinging pests actually cause more serious reactions which may lead to anaphylaxis. Also, repellents do not repel spiders.

Since pharmacists are frequently asked questions about repellents, this month's lesson will examine chemical insect repellents. The uses, limitations, similarities, and differences among the various products will be discussed. Their safety and adverse reactions will also be reviewed. The lesson will list the various physical, chemical and biological factors known to affect repellent protection times.

Chemical Repellents

Chemical insect repellents are volatile substances that reduce the attractiveness of human skin to insects. Aside from possibly frustrating hungry insects, repellents do not harm or kill them. Ideally, they should keep the insects from landing on the skin. Some repellents achieve this. Other repellents allow the insect to land on the skin but not bite. While the mechanism of action is not completely understood, it is proposed that the repellent activity is achieved by disguising human body odors from insect detection.

Currently, there are three chemicals used as insect repellents in the United States (see Table 1). They are **diethyl-m-toluamide** (DET, DEET), **ethyl hexanediol** (ethohexadiol), and **dimethyl phthalate**.

Consumers frequently express personal preference for OTC products containing specific ingredients, while others request direction in choosing an insect repellent. Since the U.S. Department of Agriculture has identified DEET as the most powerful, best all-purpose repellent, one may feel confident in recommending it.

(continued on page 10)

CORRESPONDENCE COURSE

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TABLE 1
Chemical Insect Repellents

Repellent	Representative Product
Diethyl-m-toluamide	OFF products
Dimethyl phthalate	in some Cutter products
Ethyl hexanediol	6-12 products

DEET is the standard against which all other repellents are compared. It is reported to possess greater resistance than the other chemical repellents to removal by abrasion and washing off in water.

All three chemical repellents are useful against a wide variety of mosquitoes, chiggers, gnats, flies, and ticks. These are the most common insect pests in the U.S. and Canada. Unfortunately, none of these repellents protect for more than a few hours and all require repeated application for continued effectiveness.

Various volatile oils including citronella, bergamot, cassia, clove, eucalyptus, lavender, pennyroyal, turpentine, and wintergreen have been used to repel insects. These substances purportedly offer repellent action primarily against mosquitoes and flies. At best, this action appears to be minimal. None is acceptable for widespread use in high concentrations directly on the skin since such application runs the risk of causing adverse reactions.

What Attracts Insects to Humans?

Mosquitoes are believed to be attracted to humans by a variety of factors: sweat, moisture, heat, odor, and carbon dioxide. The insect's sight is important, but to a lesser degree. It may play a greater role if the target is in motion.

The most important factor for attracting mosquitoes from a distance is body odor, which is partly determined by sweat. As long as the wind is blowing away from the insect and toward the individual, mosquitoes at a distance will be little attracted. If they are downwind from an individual, the mosquitoes will travel upwind from as far away as 30-feet. For shorter distance attraction, mosquitoes are allured more by moisture, then carbon dioxide, and then heat.

There is a lipid component of sweat that seems to repel mosquitoes. When this substance is removed from sweat, mosquitoes become more attracted to humans. If this finding is significant, variations in the amount of this component of sweat may help explain why some people are more susceptible to mosquito bites than others.

Determining the identity of this substance and manufacturing it on a large scale may help lead to the development of an effective systemic repellent. Or, the substance may be incorporated into OTC topical repellent products to enhance their efficacy.

But the attraction of insects to humans is more complex. There are still many unanswered questions. The specific mechanism of attraction remains unknown.

Historical Considerations

More than 25,000 chemicals have been tested for insect repellent activity by the U.S. Department of Agriculture since 1942. At that time, the Department initiated a widespread search for chemicals that would effectively repel disease-transmitting insects. The greatest interest was in finding chemicals that would protect American military personnel stationed in tropical or subtropical climates.

Commercial uses were not part of the original program. During World War II, for example, U.S. armed forces lost four times as many productive days of action to diseases as they did to battle wounds. Anthropod-borne diseases were responsible for the largest number of lost combat/work days.

Chemical compounds were chosen at random from shelves of various commercial, governmental, or college laboratories, and subjected to screening programs to determine whether they reduced the attractiveness of human skin to insects. Others were specifically synthesized with definite chemical characteristics in mind which were thought to be important to effective repellent activity.

While approximately 2 out of every 1000 chemicals tested showed promise of effectiveness *in vitro*, few of them met all of the criteria which were identified for insect repellent activity on humans (see Table 2).

The emphasis on toxicity is evident in that repellents are frequently used over large areas of the body for prolonged periods of time.

Individual Variances

A commonly expressed complaint is that insect repellents do not work, or do not work as well on some individuals as they do on others.

This may be due to improper use of the products. Correctly used, the chemical repellents listed in Table 1 are usually effective for most individuals. Consumers may achieve better success with insect repellents if they are aware of the following factors which influence product effectiveness.

TABLE 2
Criteria for Safe and Effective Chemical Inspect Repellents

- Effective against a wide variety of insect species
- Feel comfortable and cosmetically acceptable
- Inoffensive odor
- Withstand removal by wiping and abrasion, hot and humid weather conditions, and sweating
- Stable in sunlight
- Long lasting action
- Harmless to clothing, eyeglasses and jewelry
- Nonirritating and nonallergenic
- Nontoxic

Concentration. The concentration (amount) of repellent applied to the skin is the primary consideration for effectiveness. Repellents listed in Table 1 are safe when applied to the skin as directed on their labels. The concentration remaining on the skin over the period of time following application is a very important consideration.

Repellents form a protective barrier on the skin. Tests have shown this vapor barrier extends to less than 4 cm from the site of application. Following application, mosquitoes may still be attracted to human skin, but they will not bite.

For more volatile compounds, the greater the distance from the site of application, the more effective the product will be. Since the protective barrier extends 4 cm at most from the site of direct application, all exposed areas of skin must be treated if protection is to be complete. Additionally, their benefit is countered somewhat by loss of protective action due to evaporation from the skin.

Abrasion/Wiping. Removal of repellent by abrasion or wiping accounts for the greatest loss of activity. Even with moderate movement, the repellent will be wiped from the skin, especially at the collar and sleeves. With more intense physical activity such as work or exercise, removal is hastened. Clothing, knapsacks or similar articles may rub across the skin several hundred times within a few minutes. The more intense the physical activity and the greater the friction, the more frequently greater amounts of repellent should be applied.

Sweating. As discussed earlier, sweat is one of the major attractants of mosquitoes and many other insects. Sweating will dilute repellents and hasten their evaporation. When sweating is profuse, the repellent action is lost even more quickly. Repellents are still active when diluted, as long as their concentration on the skin remains high enough.

Loss From Water Wash-off. Fishermen, campers, and persons who are subjected to frequent bathing or rain showers are susceptible to rapid repellent removal. None of the currently available repellents resist water wash-off. They are quickly diluted and rinsed from the skin.

Environmental Temperature. Since chemical repellents are volatile, there is a direct correlation between ambient temperature and rate of repellent removal by evaporation. In one study, the effect of DEET with temperatures between 25°C to 50°C was investigated. A statistically significant negative correlation was found between temperature and time. It was demonstrated that for each 10°C increase in temperature, repellent protection time was reduced by fifty percent. In other tests, ethyl hexanediol withstood heat the least. When all factors are kept equal, protection time is much longer at room temperature than at higher temperatures.

Wind Velocity. Wind velocity and air currents are also important to repellent activity. This was demonstrated with DEET used as the control repellent. When the repellent was applied at room temperature (26°C) with normal air currents, it provided a protection time of 200 minutes against mosquito bites. When the same concentration was applied and wind velocity was increased to 192 meters/minute, protection time decreased to 73 minutes. So when repellents are used in high wind velocity, they will need to be reapplied more frequently.

Minimum Effective Dose (MED). The MED is the smallest concentration of repellent which, when first applied, will inhibit insect biting. The values reflect relative repellent potency and are used in comparative studies when newer compounds are tested against older ones.

However, these values may have more theoretical than practical application. For example, Table 3 lists MED values and repellent protection times for the three chemicals in popular use and three others also reported to have repellent activity. There was no positive correlation noted.

However, a negative correlation could be due

continued on page 13

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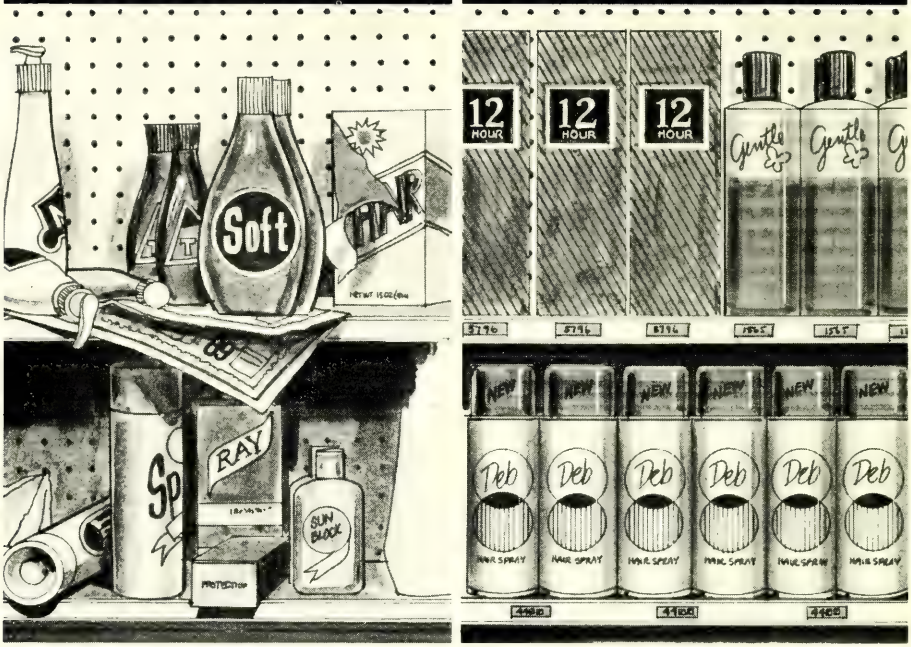

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CORRESPONDENCE COURSE

Continued from page 11

to numerous factors. For example, chemical repellents bind to the skin and are absorbed at different intensities and rates. They also evaporate at different rates.

TABLE 3
Protection Time of Several Repellents Applied on the Same Subject with Corresponding MEDs*

Repellent	Protection Time ± SE	MED ± SE
DEET	4.2±0.3	0.016±0.003
Triethylene glycol monohexyl ether	6.5±0.7	0.032±0.004
Hexamethylene butane sulfonamide	10.0±1.1	0.016±0.006
Dimethyl phthalate	1.3±0.4	0.064±0.028
Ethyl hexanediol	1.8±0.5	0.064±0.012
Indalone	1.5±0.0	0.064±0.0

Protection time in hours; application at 0.16 mg/cm^2; MEDs in mg/cm^2
*Modified from: Maibach HI et al: Use of insect repellents for maximum efficacy. *Arch Dermatol* 109:32, 1974

Biological Variation. Individuals vary as to the amount of insect repellent protection they receive from any given compound. When all physical factors of temperature, air, velocity, etc., are kept constant, protection times will vary.

For example, the repellent protection times of dimethyl phthalate applied at a concentration of 8 mg/in^2 was studied on two individuals. All of the other variables were held constant. Protection times were 52 minutes on one subject and 200 minutes on the other.

Repellent Safety

Adverse reactions to insect repellents are rare and infrequently reported when the products are used as directed. These effects include local reactions such as itching and tingling, minor dermal lesions and desquamation (sloughing off of skin in scales). Sensitivity reactions are rare.

Repellents can be absorbed through the skin. Approximately half of an applied dose of DEET that is not lost through evaporation, abrasion, wash-off, etc., is reported to be absorbed within six hours. Metabolites have been detected in adipose and dermal tissues for one to two months.

Several serious reactions have been reported following prolonged application of large quantities of DEET. One patient, a 5-year-old girl, developed neurological toxicity including tremors and convulsions from nightly applications of a 10% spray product for almost three months. Her parents indicated that they had carefully followed directions on the label, and had not applied the product to any mucous membrane. She died 24 hours after onset of symptoms. At autopsy, her brain showed intense generalized edema.

Another patient, aged 18 months, drank an unknown quantity (probably small) of DEET solution. She was admitted to the hospital with tremors and generalized body seizures. She survived but her convalescence was slow.

Other repellents also appear to cause reactions ranging from irritation on application to coma following ingestion.

Is Thiamine An Effective Oral Insect Repellent?

Some consumers and authors in the lay press feel that oral thiamine is an effective insect repellent. The Food and Drug Administration and scientists who have studied it say no. Who is right?

Over the years a variety of substances have been taken internally to offer repellent protection against insect bites, mainly from mosquitoes. Sulfur and garlic, for example, have been used to impart an offensive odor or taste to the skin to ward off mosquito attack.

The best known and perhaps most widely used substance taken internally to repel insects has been thiamine (vitamin B_1). In a study published in the medical literature more than four decades ago, oral or parenteral doses of this substance were reported to repel mosquitoes. The investigator noted that nine patients, including adults, children, and infants were protected. Another trial three years later extended the protection spectrum to fleas.

Other studies since then have added more

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CORRESPONDENCE COURSE

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credence to the original observation. In some of them, thiamine doses upwards of 300 mg/day, and in one study up to 1 gm/day, have afforded apparent relief. The thiamine therapy was initiated one to two weeks before, and continued during periods of exposure to insects.

However, the reports published over the past 40 years have lacked scientifically acceptable study design. Few have utilized placebo controls needed to assure accurate results of effectiveness.

Thiamine is one of the B-complex vitamins that is generally safe even when taken in high doses. It is water soluble and quickly eliminated from the body in the urine. Its activity in repelling mosquitoes is reportedly due to its deposition under the skin. This is said to impart a disagreeable odor and/or taste that is repulsive to mosquitoes.

Over the years, thiamine has been marketed in several OTC products promoted for oral use to repel mosquitoes. This places it in the "drug" rather than "vitamin" category, because a therapeutic claim is made. Therefore, products containing thiamine that include this claim have come under the scrutiny of an FDA/OTC advisory panel.

Specifically, the available data relating to use of thiamine as an internal insect repellent were carefully and thoroughly reviewed by the FDA Advisory Review Panel on OTC Miscellaneous Internal Drug Products. The panel reported to FDA that thiamine is safe in daily doses up to 40 mg, but it believed that it was inappropriate to administer higher doses than were necessary to maintain human dietary requirements.

Nevertheless, FDA responded to the panel's report and placed the vitamin in Category II (safe, but not effective). This means that manufacturers can no longer claim effectiveness for oral thiamine as an insect repellent. The rule does not prevent the sale of thiamine for this purpose. Rather, it makes it unlawful for manufacturers or distributors to make the claim.

Summary

At the present, there is no chemical that will repel insects economically from a large geographic area. So the most practical approach is to apply an insect repellent product to all skin areas that will be exposed to biting insects.

Topically applied insect repellents are safe and effective. To achieve maximal protection against insect bites, the products must be applied in sufficient concentration. They require frequent reapplication when the various factors listed earlier come into play. Ineffective results are generally due to incorrect use of the product. A list of guidelines for consumers is included in Table 4.

TABLE 4
Consumer Advice for Insect Repellents

1. Apply this product generously to all areas of exposed skin. In areas of dense insect populations, spray it on clothing also.
2. During heavy sweating, or if it is raining, apply this product more frequently.
3. Generally, more concentrated products are better. Thus, sprays are less effective than lotions or sticks.
4. Do not spray this product directly on the face. Apply it to hands and transfer it to the face.
5. Do not use this product on any mucous membrane (lips, nose, etc.). Do not apply it on or near a cut or bruise. Do not get it in the eyes.
6. Keep this product out of the reach of children.

Combining two or more ingredients may extend the spectrum of action slightly, by an additive rather than a synergistic effect. When used against common insect species encountered from Alaska to Panama, effectiveness is usually just as significant from using increased concentrations of any one product, or applying it more frequently, as it is to combining ingredients.

The best protection is obtained from the most concentrated products. Generally, lotions, sticks, and solutions are more concentrated, and thus more effective, than sprays.

Repellents are applied directly to the skin. They can also be applied to clothing in heavily infested areas.

Vacationers could be counseled to purchase their insect repellent where they are traveling so the product will be specific for the insects in that area.

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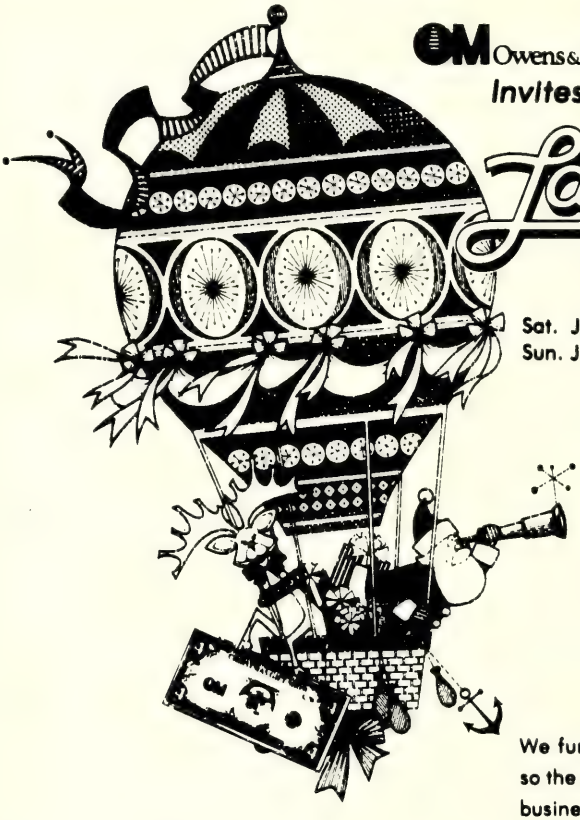

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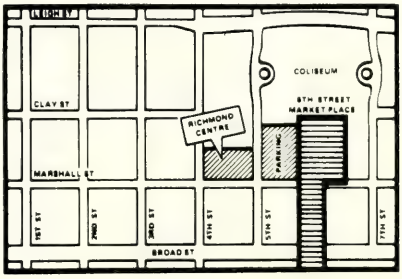

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LOVASTATIN: A New Weapon in the Fight Against Cholesterol

by James R. Talley, M.S., and Monica Holiday, R.Ph.
School of Pharmacy, Northeast Louisiana University
Monroe, Louisiana

In the United States, coronary heart disease (CHD) is the leading cause of mortality and accounts for more than 550,000 deaths (1,2). Coronary heart disease can result from atherosclerosis, a progressive condition which eventually leads to narrowing of coronary arteries (2). Due to the insufficient blood flow to the heart, CHD manifests itself in ways ranging from angina pectoris to myocardial infarction. Because CHD is a slow, insidious condition, the first manifestation is often a fatal heart attack (2).

Although the prevalence of CHD in industrialized nations is extremely high, evidence indicates that CHD can be prevented. A number of factors have been identified which increase the possibility of developing CHD. These factors are high blood pressure, smoking, obesity, diabetes mellitus, inactive life style, and high blood cholesterol levels. Several studies have postulated that a reduction in one or a combination of these factors may result in decreased CHD rates (2,3). Almost each of these factors can be attributed to the American lifestyle. The American diet contains excessive calories, fats, cholesterol (2). A high percentage of Americans are overweight and a large number of Americans are smokers. Studies have shown that people from underdeveloped nations do not have CHD rates nearly as high as Americans. Ironically, when natives of countries with relatively low CHD rates move to the United States and develop the lifestyle of most Americans, their chances or CHD increases (2).

Even though increased levels of blood cholesterol is not the sole risk factor in developing CHD, it has received a great deal of attention as one of the major causes of atherosclerosis. Cholesterol is not the only lipid containing substance in the bloodstream. However, no other lipid has been shown to contribute to the formation of atherosclerotic plaques to the extent as has cholesterol (4). Atherosclerotic plaques are formed when excessive amounts of plasma LDL deposit in the interstitial spaces and smooth muscle cells of the intimal and medial layers of the artery wall (2,4). As a result, there is considerable narrowing of the vessels that provide coronary blood supply (2).

These statements should not be interpreted that all cholesterol in the bloodstream is detrimental. The normal cholesterol level is approximately 120 mg/dl. A certain level of cholesterol is necessary for cell growth and steroid hormone synthesis (5). Problems develop when an excess amount of cholesterol is present in the bloodstream (2). Cholesterol is transported in the blood by four major categories of plasma lipoproteins (4). Chylomicrons transport dietary triglyceride and cholesterol. Very low density lipoproteins (VLDL) are the principal carriers of hepatically synthesized triglycerides. Thus, very low density lipoproteins (VLDL) primarily transport tryglycerides that have been synthesized in the liver. The remaining two categories of lipoproteins function primarily in the transport of endogenous cholesterol. These categories are low density lipoproteins (LDL), and high density lipoproteins (HDL). Approximately 70% of total plasma cholesterol is transported by LDL (4). Because of this fact, overabundant amounts of LDL are implicated in the development of atherosclerosis.

As stated earlier, LDL is necessary to supply the body's cells with cholesterol. Excessive amounts of LDL may result from overingestion of fats in the diet. Low density lipoprotein levels may also be excessive due to a genetic deficiency in LDL receptors (4). According to Goldstein and Brown, correctly functioning LDL receptors supply cells with adequate amounts of cholesterol without allowing levels high enough to precipitate atherosclerosis (4). The existence of high affinity LDL receptors allows the body to maintain plasma LDL levels below the threshold range for atherosclerosis and at the same time supply cells with adequate amounts of cholesterol. Elevated levels of LDL are noted in patients with heterzygous familial hypercholesterolemia, who have about 40% to 50% of the necessary LDL receptors, and in patients with homozygous familial hyperchosterolemia, who lack LDL receptors. Patients in the latter group usually develop myocardial infarctions before age 20 (4).

Unlike LDL, increased levels of high density lipoprotein (HDL) are correlated with a decrease in the formation of atherosclerotic plaques (6). Information from the Framingham Study has indicated that the incidence rate of coronary heart disease was eight times higher in patients

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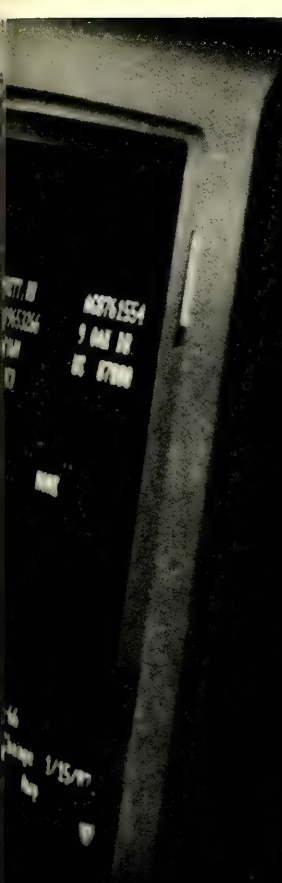

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with HDL levels below 35 mg/dl than in patients with HDL levels of 65 mg/dl or more. According to Dr. William P. Castelli of the Framingham heart study, the higher the HDL, the lower the rate of subsequent heart disease. Dr. Castelli has stated that HDL initiates the transport of cholesterol back to the liver which represents about 95% of cholesterol per day that patients excrete. Thus, higher HDL levels could result in lower total body cholesterol.

The Lipid Research Clinics Coronary Primary Prevention Trials found that increases in HDL levels in patients treated with cholestyramine provided an additional decrease in CHD risk in conjunction with decreased LDL levels (7). Since a decrease in LDL levels and an increase in HDL levels are associated with a decrease in CHD risk, effective preventive therapy in CHD should employ these principles.

Hypercholesterolemia is divided into two groups according to the National Heart Lung and Blood Institute and the National Institutes of Health Office of Applications (2). Moderate risk hypercholesterolemia is denoted as greater than 200 mg of cholesterol per deciliter of blood in patients 20 to 29 years of age, greater than 220 mg/dl in patients 30 to 39 years old, and greater than 240 mg/dl in patients 40 years old or older. High risk hypercholesterolemia is described as cholesterol levels greater than 220 mg/dl in 20 to 29 year olds, greater than 240 mg/dl in 30 to 39 years olds, and greater than 260 mg/dl in patients 40 years old or older. Both moderate and high risk hypercholesterolemia should be treated.

Although there are drugs available that will lower serum cholesterol levels, these drugs are used only after a diet that reduces calories, fats, and cholesterol has proven insufficient (2). In the treatment of hypercholesterolemia, the Blood Cholesterol Consensus Conference recommends that no more than 250 mg to 300 mg of cholesterol be consumed per day with fat intake of about 30% to total caloric intake. Saturated fats should compose no more than 10% of daily calories. If this diet is inadequate in arriving at a normal blood cholesterol level, total fat intake should be decreased to 20% to 25% of calories with saturated fats comprising 6% to 8% of total calories. No more than 150 mg to 200 mg of dietary cholesterol should be consumed per day (2). An increase in the amount of physical activity may also be beneficial in lowering serum cholesterol levels.

A cholesterol restricted diet is the first step in lowering blood cholesterol, but diets that lower cholesterol by substantial amounts are unpalatable and consequently have a low degree of compliance. Low cholesterol diets appetizing enough to be tolerated by most patients only reduce cholesterol levels by about 10% (8,9).

Only after a serious effort at decreasing serum cholesterol by diet has proven ineffective should drug therapy be utilized. Fortunately, medications are available to potentiate decreases in cholesterol. The most common antilipidemic agents in use today are the bile acid sequestrants (cholestyramine and colestipol), probucol, nicotinic acid, dextrothyroxine, and the fibric acids (clofibrate and gemfibrozil). These drugs are listed in Table 1. A number of hypercholesterolemic patients are not willing to utilize the aforementioned agents because of their side effects, expense, or unpalatability.

TABLE 1
Antilipidemic Agents

	Trade Name	Company
Bile Acid Sequestrants		
Cholestyramine	Questran	Mead Johnson
Colestipol	Colestid	UpJohn
Fibric Acids		
Clofibrate	Atromid-S	Ayerst
Gemfibrozil	Lopid	Parke Davis
Other Agents		
Dextrothyroxine	Choloxin	Flint
Nicotinic Acid (Niacin)	various	various
Probucol	Lorelco	Merrell Dow
Lovastatin (Mevinolin)	Mevacor	MSD

Bile Acid Sequestrants: Cholesterol is the major precursor of bile acids (10). Bile acid sequestrants function by forming an insoluble complex with bile acids in the intestine. This complex is subsequently excreted in the feces (10). Drugs in this category are cholestyramine (Questran by Mead Johnson) and colestipol HCl (Colestid by UpJohn). These resins are available in the form of powders which are mixed in a liquid drink. The recommended daily dose of cholestyramine is four grams, one to six times daily. For colestipol, the recommended daily dose is fifteen to thirty grams, two to four times daily. The bile acid sequestrants decrease serum levels of LDL and either increase or leave unchanged serum VLDL levels. Constipation and

aggravation of hemmorhoids are common in patients using these drugs.

Probucol: Probucol (Lorelco by Merrell Dow) exhibits its antihyperlipidemic effect by increasing the catabolic rate of LDL. Thus, cholesterol synthesis, dietary cholesterol absorption, and cholesterol in HDL fractions are also decreased by probucol. The recommended dosage of probucol is 500 mg with morning and evening meals. Diarrhea is a problem for about 10% of the patients using probucol.

Nicotinic Acid: Nicotinic acid (niacin) therapy results in a decrease in LDL synthesis by decreasing the synthesis of VLDL. Low density lipoproteins are a product of the catabolism of VLDL. High density lipoprotein is increased with niacin therapy. Required doses of niacin range from one to two grams daily. The most common side effect is cutaneous flushing; primarily of the face, neck, and ears.

Dextrothyroxine: Dextrothyroxine (Choloxin by Flint) results in a reduction of serum cholesterol and LDL levels in hyperlipidemic patients. This drug stimulates the liver to increase cholesterol catabolism and increases the excretion of cholesterol and degradation products by the biliary system into the feces.

Fibric Acids: The antihyperlipidemic agents known as the fibric acids are clofibrate (Atromid-S by Ayerst) and gemfibrozil (Lopid by Parke Davis). Both clofibrate and gemfibrozil lower serum triglyceride and VLDL levels. Neither agent has a great effect on LDL levels. However, gemfibrozil may increase HDL levels. Clofibrate is usually administered, two grams daily in divided doses. The major side effect associated with this drug is nausea. The recommended dose of gemfibrozil is 120 mg/day in two divided doses. Common side effects associated with this drug are abdominal pain, epigastric pain, and diarrhea.

Lovastatin: The previously discussed drugs are only correctly utilized in a few patients because of their expense and side effects. Fortunately, a new class of antihyperlipidemic agents has been developed. Lovastatin (Mevacor by Merck Sharp & Dohme) is one such drug. It is available in 20 mg tablets with a recommended starting dose of 20 mg once daily with the evening meal. The recommended dosage range is 20 mg to 80 mg daily in single or divided doses. Mevacor received FDA approval in early September 1987, and was available to patients by the end of the month.

Lovastatin (formerly mevinolin) was isolated from a strain of Aspergillus terrus (10). In the fight against hypercholesterolemia, this agent reduces LDL levels and increases HDL levels. Three-hydroxy-3-methyglutaryl-coenzyme A (HMG-CoA) is converted to mevalonate by the enzyme HMG-CoA reductase (10,11). Mevalonate is essential in the formation of cholesterol. In vivo, mevinolin is hydrolized to mevinolinic acid (12,13). Mevinolinic acid is a potent inhibitor of HMG-CoA reductase. Accordingly, cholesterol synthesis is reduced because lovastatin acts as an inhibitor of HMG-CoA reductase and subsequently interrupts the biosynthesis of cholesterol. Therapeutic doses of lovastatin do not produce a complete inhibition of HMG-CoA. Therefore, adequate amounts of cholesterol are still available for normal cell growth and steroidogenesis (12).

As stated earlier, increased LDL levels may be due to a deficiency in LDL receptors. Located on the surface of nonhepatic cells, these receptors are instruments by which the cell binds plasma LDL required for growth (4). Lovastatin's mechanism of action may entail an induction of LDL receptors (12,13). An induction of LDL receptors help to eliminate LDL in the bloodstream while inhibition of HMG-CoA reductase decreases its production.

The relative safety and effectiveness of mevinolin were demonstrated in several clinical trials. One such trial was a double-blind, placebo controlled study involving 50 healthy men (11). For a period of four weeks, doses as small as 6.25 mg and as large as 50 mg were administered twice daily. At the end of treatment, total serum cholesterol decreased 23% to 27% while LDL levels decreased 35% to 45%. The highest dose did not demonstrate a significantly larger decrease in cholesterol than the smallest dose. Only one subject was withdrawn from the study because of adverse effects. Although a dosage schedule of 25 mg once daily did result in a decrease in cholesterol levels, the decrease was not as substantial as those from the use of 6.25 mg and 12.5 mg twice daily.

Nonfamilial hypercholesterolemia is an elevated cholesterol level which is not due to genetic factors. A double-blind, placebo controlled study of 101 nonfamilial primary hypercholesterolemia patients was performed to examine the safety and effectiveness of lovastatin in these patients (8). Treatment was studied over an 18 week period. Doses of 10 mg to 80 mg per day were administered as single or divided doses. Total cholesterol and LDL levels decreased substantially in all groups. The 40 mg bid group showed the greatest

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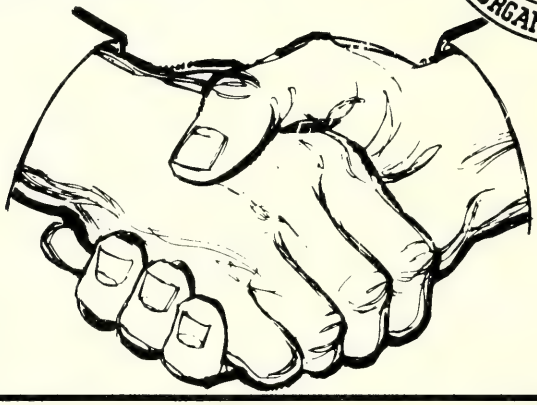

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decrease in total cholesterol levels. The mean reduction was 32% in these patients. This group also demonstrated the sharpest decrease in LDL (39%). No patient had to be withdrawn from the study and no serious adverse effects due to lovastatin were reported.

Familial hypercholesterolemia is a result of genetic deficiencies of LDL receptors. A double-blind, randomized crossover, placebo controlled study in 24 patients with familial or nonfamilial hypercholesterolemia was performed (14). Mevinolin lowered total cholesterol by 24% to 29% and LDL by 31% to 34%. The concentration of HDL was increased 16% compared with the placebo. The nonfamilial hypercholesterolemia patients experienced a larger decrease in total cholesterol levels than did the familial patients. However, when results were compared by percentages, decreases in LDL for both groups were similar. No serious toxicity due to treatment with mevinolin was observed.

Overall, less than 1% of patients were discontinued from controlled clinical trials due to lovastatin related adverse effects (12). The most common adverse effects were gastrointestinal and included: constipation, diarrhea, dyspepsia, flatus, abdominal pain and cramps, heartburn, and nausea. The incidence of these effects were usually lower with lovastatin as compared to other antilipidemic agents. Headache and rash were other major side effects reported.

A number of patients that were eliminated from studies due to adverse effects developed substantial increases in serum transaminases. Therefore, it is recommended that liver function tests be performed every four to six weeks during the first 15 months of lovastatin therapy and periodically thereafter (12). Accordingly, lovastatin should be used cautiously in heavy alcohol consumers.

Clinical trials also showed a high incidence of lens opacity development in patients treated with lovastatin. There were no decreases in visual acuity reported in these patients. It is recommended that all patients treated with lovastatin have slit lamp eye examinations at least every year (12).

Although several clinical studies showed the substantial antilipidemic effect of lovastatin, it should not be considered a miracle drug. Patients utilizing lovastatin must still comply with low cholesterol diets in order to get adequate results. Nevertheless, because of its relatively simple dosing schedule, relatively low incidence of side effects, and its appreciable decrease in serum cholesterol levels, lovastatin may become an effective weapon in the fight against cholesterol.

REFERENCES

1. The Lipid Research Clinics Coronary Primary Prevention Trial Results; *JAMA*, June 20, 1984; 251: 351-364.
2. Blood Cholesterol-Consensus Conference, Lowering Blood Cholesterol to Prevent Heart Disease; *JAMA*, April 12, 1985; 253: 2080-2086.
3. Pooling Project Research Group Relationship of Blood Pressure, Serum Cholesterol, Smoking Habit, Relative Weight, and ECG Abnormalities to Incidence of Major Coronary Events: Final Report of the Pooling Project; *Journal of Chronic Disease,* 1979; 31: 201.
4. Goldstein, J., Brown, M., The Low-Density Lipoprotein Pathway and Its Relation to Atherosclerosis; *Annual Review of Biochemistry,* 1977, 46: 897-930.
5. Mabuchi, H., Haba, T., Tatami, R., Effects of an Inhibitor of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase on Serum Lipoproteins and Ubiquinone-10 Levels in Patients with Familial Hypercholesterolemia; *New England Journal of Medicine,* August 27, 1985; 305: 478-482.
6. Gordon, T., Castelli, W., High Density Lipoprotein As A Protective Factor Against Coronary Heart Disease. The Framingham Study; *The Journal of American Medicine,* May 1977; 62: 707-713.
7. The Lipid Research Clinic's Coronary Primary Prevention Trial Results II. The Relationship of Reduction in Incidence of Coronary Heart Disease to Cholesterol Lowering; *JAMA,* January 20, 1984; 251: 365-373.
8. Therapeutic Response to Lovastatin in Nonfamilial Hypercholesterolemia; *JAMA*, November 28, 1986; 256: 2829-2833.
9. Port, O., (editor), The FDA Nods at a Cholesterol-Buster, *Business Week,* March 23, 1987, p. 109.
10. Facts and Comparisons Drug Information. J.B. Lippincott Company, St. Louis, Mo.
11. Tobert, G., Birtwell, I., Cholesterol-Lowering Effect of Mevinolin, an Inhibitor of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase in Health Volunteers; *Journal of Clinical Investigations,* April 1982; 69: 913-919.
12. Merck, Sharp, and Dohme, Mevacor Package Insert.
13. Robinson, B., Merck's Cholesterol-Lower-

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ing Drug gets Swift Attention; *Drug Topics,* March 16, 1987, p. 27.
14. Hoeg, J., Maher, M., Effectiveness of Mevinolin on Plasma Lipoproteinemia; *American Journal of Cardiology,* April 15, 1986; 57: 933-939.

NEWS RELEASE

Food and Drug Protection officials of the North Carolina Department of Agriculture warned consumers about over-the-counter drugs which claim to kill or cure genital herpes, when in fact, they do not.

Stated Agriculture Commissioner Jim Graham, "Only one company has been approved by the Food and Drug Administration (FDA) to make a treatment for genital herpes, and the drug, Zovirax, is produced by Burroughs Wellcome. Zovirax is available by prescription only."

"Any other topical drugs other than Zovirax have not been approved by FDA and registered for use on genital herpes," said Robert L. Gordon, director of the NCDA Food and Drug Protection division. "Zovirax interferes with the herpes simplex virus DNA polymerase, inhibiting viral replication. No other approved drug, prescription or over-the-counter, has the same effect on genital herpes."

The over-the-counter topical medications which claim or imply that they cure or kill herpes simplex viruses may contain povidone-iodine cream (PVP-I), which has an inhibiting effect on bacteria and viruses in general, but does not cure genital herpes, and has little effect on outbreaks of genital herpes in humans. Zovirax contains acyclovir, and does not cure genital herpes, but has a significant effect in controlling the painful outbreaks of genital herpes in humans.

"Genital herpes is a painful and distressing disease," continued Gordon. "We want consumers who may have the disease to know that the only effective treatment for it is by prescription only from a physician, and not to waste their money on over-the-counter imitaitons."

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DICKINSON'S PHARMACY

by Jim Dickinson

Pharmacy's acid test. One of the things I've always liked about pharmacy is that there's never a dull moment. For as long as I can remember, people have been saying, "Pharmacy's at the crossroads . . ." and then giving imperative advice, even ultimatums, to the profession as a whole.

The profession has never obeyed, mainly because it's composed of very individualistic individuals.

So here comes the latest crossroad: SERVICE. Or, rather, the lack of it. While pharmacy has always prided itself on the service it gives, everyone (including every pharmacist I ever met) takes it for granted.

It's the one edge that real, live pharmacists have over mail-order and dispensing physicians — free, friendly, convenient service, live and in person, just for the asking. Which side-effects to be prepared for, what other steps to take, which OTC to buy, when to (expensively) consult the physician.

Pharmacy service is always "free." By charging zero for it, pharmacists have unwittingly conditioned the community to think of it as being worth zero.

Along comes health cost-containment. This none-too-clever policy is controlled and operated by attitudes of pharmacy's own making — a whole new "network" that's alien to pharmacy.

This health-policy network is plugged-into by people who all have the same conditioning — that all you pay for in a pharmacy is the medical commodity plus profit (which may be too high).

Also plugged-in to this network are the fiscal heavyweights — the HMOs, Medicaid, Medicare, Aetna, the Blues, and others of that breed — plus get-rich-quick opportunists like the mail-order houses and dispensing physicians.

All of which tends to leave the community pharmacy with nothing to do.

But into this awful crisis, along comes an exciting new defender: Highly automated, desk-top blood-level monitoring technology that's ideal for pharmacy use. It's developing at breakneck speed; in the estimation of FDA Commissioner Frank E. Young, the most sophisticated tests will be available for in-home use during the 1990s.

That, of course, means they will be available through mail-order. So the time to act is now —while the growing ranks of mobile people on maintenance therapy can still be imbued with the pharmacy habit.

The new-age tests need an investment of around $3,700 (more or less), the courage to take a careful chance, and advertising help.

With a simple finger-stick, blood tests for theophylline levels (and a rapidly growing number of other drugs) can be conducted in minutes in the pharmacy, and charged for. On the basis of University of Arizona pharmacy school research, considering number of tests and other factors, a test may cost the pharmacy $13 to perform, while the public is prepared to pay $25 for it.

Insurance companies are now paying over $90 for such tests, driven mainly by outmoded federal and insurance regulations that require these tests to be done in certified laboratories on the order of a licensed physician, with results reported to that physician.

But the new technology's desktop centrifuge-analyzers make such costs a rip-off.

They can bring into the pharmacy numerous blood tests for monitoring and adjusting the therapeutic ranges of theophylline, digoxin, carbamazepine, phenobarbitol (and more to come), plus scores of other substances such as cholesterol, sodium, glucose, etc.

This has been successfully demonstrated with theophylline levels by the Arizona pharmacy school (professor of pharmacy practice J. Lyle Bootman, Ph.D., 602-626-5730), in a small chain community pharmacy.

Patients on sustained-release theophylline therapy had their medical histories and blood pressures taken in the pharmacy, and then a blood sample was drawn by a prick of a lancet.

The pharmacist or an assistant mixed 30 microliters of blood with distilled water to make an 800 microliter mix, a drop of which was added to a chemically impregnated paper strip. This, in turn was fed into a reflectance photometer (the study used a $3,750 Ames Seralyzer, but others range from $1,200 to $15,000), which has a cassette programmed for each test type.

The machine reads the amount of color and codes it to the concentration of the drug. Patients are then counseled about their blood levels and how the drug works — a total time span of 10-15 minutes. They said the whole procedure was worth a $25 charge.

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DICKINSON'S PHARMACY

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In the Arizona experiment, test results were forwarded to the patient's physician for pharmacokinetic adjustments; Bootman says the next step wil be pharmacokinetic adjustments by the pharmacist, but in most states this will require a change in the law.

State law would need to be consulted in any case, lest there be some hidden statute requiring all such tests to be done in expensive surroundings and under expensive professional procedures. The new technology has outstripped the basis for such laws, if they exist.

If they don't, the only thing stopping a pharmacy from doing such tests is (a) liability fears and (b) local professional turf-protection. These amount to a simple, if big decision for the pharmacist: Do I have the guts to do it?

The automation of such tests minimizes the liability risk — but lawyers and insurance companies are skilled at frightening you. The question may be whether you have the courage to self-insure.

Eventually, of course, the insurance industry will discover the risklessness of this new technology, and the enormous cost savings and premiums will encourage pharmacy blood tests.

But while pharmacists are waiting for that to happen, the technology itself will continue developing, becoming simpler and cheaper (like the digital wrist watch and VCR) until anyone at home will be able to get it all by mail.

In this age of commodity-drugs, I say it's an acid test for pharmacy. Right now.

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsibility for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

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AGGRESSIVE CHOLESTEROL-LOWERING THERAPY SHOWS DRAMATIC BENEFITS

Combining cholesterol-lowering drugs with intensive diet intervention significantly lowers blood cholesterol and retards the formation of plaque, fatty deposits that narrow the blood vessels and lead to atherosclerosis, reported the Cholesterol-Lowering Atherosclerosis Study (CLAS). And in some cases, the study said, treatment even reverses atherosclerosis.

Colestipol (Colestid Granules, Upjohn) and niacin (a vitamin) were the drugs used in this two-year study conducted by David Blankenhorn, M.D., director of the Atherosclerosis Research Institute and professor of medicine, and his colleagues from the University of Southern California School of Medicine, Los Angeles. Subjects were 162 nonsmoking men, 40 to 59 years, who had previously undergone coronary bypass surgery.

Ruth L. Johnson, director of nutrition research and applications at the institute, told *Diabetes & Heart Facts* the study was undertaken because of a lack of convincing evidence that lowering blood cholesterol levels reduces the buildup of fatty deposits that clog arteries and cause heart attack. "We supplied that evidence," she said.

After a couple of screening visits, the men were put on individualized strict diets that limited fats and banned egg yolks, Johnson explained. After growing accustomed to the diets, the group was divided in two. Half received a combination of colestipol hydrochloride and niacin, and the other half received a placebo.

The study's results showed significant differences between the two groups. Of the drug-related group, 61 percent improved or remained the same, while only 39 percent of those given placebos did so. In addition, Johnson noted that 16.2 percent of the patients in the drug-related group showed a regression in plaque (a shrinking of the fatty deposits around the heart) as compared with on 2.4 percent of the placebo-treated group.

The evidence from this study indicates that lowering cholesterol offers new hope for people with coronary disease, according to Johnson. She warned, however, that the drugs have side effects and should not be used for everyone, especially people with diabetes since niacin can increase glucose levels.

"Beneficial Effects of Combined Colestipol-Niacin Therapy on Coronary Atherosclerosis and Coronary Venous Bypass Grafts," David H. Blankenhorn, M.D., et al., Department of Medicine, University of Southern California School of Medicine, Los Angeles, Journal of the American Medical Association, Vol. 257:23, June 18, 1987, pp. 3233-3240; Interview with Ruth L. Johnson, Nutrition Research and Applications, Atherosclerosis Research Institute, University of Southern California School of Medicine, Los Angeles, July 21, 1987.

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CONTROL OF BLOOD SUGAR LEVELS CALLED KEY TO DIABETES SURVIVAL

By Charles M. Peterson, M.D.
Director of Research
Sansum Medical Research Foundation
Santa Barbara, Calif.

Jim (Catfish) Hunter, just elected to baseball's Hall of Fame, has diabetes. So does Mary Tyler Moore. Both Thomas Edison and Ernest Hemingway suffered from it.

Clearly, diabetes is a disease you can live with.

Just as clearly, however, it's a disease that can kill you.

Diabetes, with its complications, is the third leading casue of death by disease in the United States today. Some 11 million Americans are believed to have diabetes. This year alone, an estimated 30,000 people will die from the disease itself and another 300,000 from its complications.

Complications: A Grim Picture

Diabetes (in which the body's capacity to convert sugar into energy is impaired) is not in itself usually a killer. But its attendant complications, brought on by high levels of unmetabolized sugar (glucose), present a grim picture: coma; blindness; kidney disease; blood vessel damage; infection; heart disease; nerve damage; high blood pressure; stroke; amputation; and poor outcome of pregnancy.

The good news today is that those complications, if caught early enough, *can* frequently be controlled. The bad news is that all too often they are not.

The Centers for Disease Control (CDC) say that between 50 and 85 percent of the acute and chronic complications that are associated with diabetes and contribute to mortality are preventable or treatable.

Yet the death rate for diabetic patients under 45 years of age has been reported as eight times that of the same age group in the general population.

Two recent studies lend weight to the CDC report. One, in the state of Washington, found that almost one-third of the deaths of young diabetes patients were due to acute complications for which definitive therapy exists. A study in Great Britain, meanwhile, reported that *neglect of diabetes* was considered a contributing factor in 27 percent of more than 400 deaths of diabetic patients who died before the age of 50.

Proof a Long Time Coming

Many of us who have devoted most of our professional lives to studying diabetes have long believed that maintaining blood glucose at levels near normal should slow the devastating complications of the disease. Our difficulty was that we had only animal studies to bear out the validity of our theory. Only in the last couple of years have human trials shown the same results.

Now, however, evidence is mounting on all sides to indicate that near normoglycemia (normal blood glucose levels) can delay the progression of heart disease, retinopathy (eye damage), nephropathy (kidney damage), hypertension (high blood pressure) and vascular (blood vessel) complications.

Patients with non-insulin-dependent diabetes (roughly 80 to 90 percent of the diabetic population in the United States) can most often maintain normal blood glucose levels through strict compliance with a restricted diet and a regulated exercise program. Patients with more intractable cases can add oral hypoglycemics (medications that bring down blood sugar levels) or insulin.

In patients with insulin-dependent diabetes, daily injections are necessary to life. But now we are finding that by giving these patients insulin in a manner which more closely mimics what the normal pancreas provides, we can not only keep them alive but also retard the development of complications.

Self-Monitoring Urged

One of the first steps to that approach is self-monitoring.

A National Institutes of Health (NIH) panel last year strongly recommended that patients with diabetes routinely monitor their own blood glucose levels (in the case of insulin-dependent diabetic patients, as often as four times a day).

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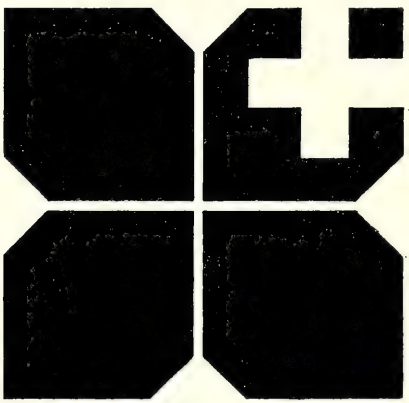

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CONTROL OF BLOOD SUGAR

Continued from page 29

Home-monitoring systems are relatively easy to use. If patients receive proper training, these systems are invaluable in giving them the information they need to help them achieve near normal blood sugar levels — tight control. And, perhaps because self-monitoring serves to focus patients' awareness on the seriousness of the situation, it actually appears to improve patients' compliance with their physicians' orders.

Definitive findings on just how tight control does affect the progression of complications is the object of a massive federally funded study now in its preliminary stages in 21 medical centers around the country. Called the Diabetes Control Complications Trial (DCCT), it will eventually involve more than 1,400 insulin-dependent patients for a period of up to 10 years.

So far, study participants receiving multiple injections or continuous insulin-pump infusions have been able to maintain blood glucose levels much closer to normal standards than have the individuals getting just one or two injections a day.

Solid Evidence Backs Theory

Most of us are confident the study will show conclusively that tight control can halt the progression of most diabetic complications. Even without the DCCT, however, there is now solid proof that tight control is indeed effective.

In fact, a series of studies on the subject since 1978 found unequivocally that "blood glucose levels are important for the development and progression of diabetic microangiopathy (small blood vessel damage) in humans." It follows then that control of glucose levels is vital to forestalling the development of such complications.

Most of the studies on the effects of tight control have involved young patients with insulin-dependent diabetics, but the incidence and consequences of complications are also major concerns in patients with non-insulin-dependent diabetes, most of whom are over the age of 55.

Elderly Patients at High Risk

David M. Nathan, M.D., assistant professor of medicine at Harvard Medical School, and his colleagues at Massachusetts General Hospital in Boston compared 250 non-insulin-dependent diabetic patients with 50 age-matched controls. Those with diabetes showed a significant increase in eye, kidney and circulatory complications. The investigators said the notion that non-insulin-dependent diabetes in the elderly represents a "mild" disease with regard to complications must be discarded.

There is no doubt, the Massachusetts group said in another study, that retinopathy can be directly related to high blood glucose levels. The effective control of those levels, they said, might prevent or inhibit the progression of the disease that is likely to cause almost 6,000 cases of blindness in the U.S. this year.

Another study, from the Clinical Diabetes and Nutrition Section of NIH, found that tight control of glucose levels in patients with non-insulin-dependent diabetes can reverse the buildup of some of the more damaging elements of cholesterol, those that may lead to atherosclerosis and heart disease.

While all the proof is not yet in, it would appear that tight control of blood glucose levels offers a timely and effective approach to this still enigmatic disease. It cannot work, however, unless patients comply with their prescribed regimens. They have good reason to: It could be the most important step they ever take toward saving their own lives.

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CORRESPONDENCE COURSE QUIZ

Insect Repellents

1. The U.S. Department of Agriculture has identified which of the following as the most powerful all-purpose insect repellent?
   a. Citronella extract
   b. Diethyl-m-toluamide
   c. Dimethyl phthalate
   d. Ethyl hexanediol
2. Which of the following is a true statement?
   a. The more volatile the repellent, the less effective it is.
   b. The protective barrier of a repellent generally extends one to two feet from the site of application.
   c. The more intensive the physical action of a person using an insect repellent, the less frequently it needs to be applied.
   d. The greatest loss of repellent action is due to removal by abrasion and wiping.
3. Given the fact that the best insect repellent action is provided by highly concentrated products, which of the following is generally the LEAST effective product form?
   a. Lotion
   b. Solution
   c. Spray
   d. Stick
4. All of the following are true statements about insect repellents EXCEPT:
   a. Nearly one-half of all chemicals tested for their repellent acting during World War II showed promise of effectiveness.
   b. The potential toxicity of chemicals used to repel insects is important because they are frequently applied over large areas of the body, for prolonged periods of time.
   c. During World War II in tropical areas, anthropod-borne diseases were responsible for the largest number of lost combat/work days.
   d. During World War II, chemical compounds were chosen at random and subjected to screening programs to determine whether they had insect repellent actions.
5. Commercially available "6-12" insect repellent products contain which of the following chemicals?
   a. Citronella extract
   b. Diethyl-m-toluamide
   c. Dimethyl phthalate
   d. Ethyl hexanediol
6. Currently available insect repellents exert their greatest activity against which of the following pests?
   a. Bees
   b. Hornets
   c. Mosquitoes
   d. Wasps
7. The currently proposed mechanism of action for chemical insect repellents is that they:
   a. deposit a layer of chemical residue that is impervious to insect stingers.
   b. disguise human body odors from insect detection.
   c. kill insects that land on the skin.
   d. prevent insects from landing on the skin.
8. The fact that FDA has placed thiamine in Category II for OTC use as an oral insect repellent drug means:
   a. it is safe and effective for OTC use an an insect repellent.
   b. it is unlawful for a pharmacist to sell thiamine to a consumer who believes it is effective as an insect repellent.
   c. it is unlawful for a consumer to purchase thiamine and take it in the belief that it is an effective insect repellent.
   d. it is unlawful for a manufacturer/distributor to make a claim that thiamine is an effective insect repellent.
9. Which of the following is a true statement about thiamine?
   a. The substance is synonymous with vitamin B_6.
   b. It has been proven safe and effective for use as an oral insect repellent.
   c. It has a disagreeable odor.
   d. It is known to be unsafe when the daily dosage exceeds 10 mg.
10. Commercially available "OFF" insect repellent products contain which of the following chemicals?
    a. Citronella extract
    b. Diethyl-m-toluamide
    c. Dimethyl phthalate
    d. Ethyl hexanediol

March, 1988

TRANQUILIZER UNEXPECTEDLY FOUND ALSO TO RELIEVE CANCER PAIN

The minor tranquilizer alprazolam (Xanax, Upjohn) was found also to have an unexptected pain-relief-enhancing effect in a particular group of cancer patients being treated for various psychiatric problems.

According to a study reported in the *Journal of Clinical Psychopharmacology*, 39 patients with several types of cancers and most with a particular type of pain characterized as sharp, intense and burning (such as that resulting from the feeling of a phantom breast or limb) showed a marked reduction in pain after being treated with alprazolam for an underlying mood or anxiety disorder.

None of the patients experienced any neurotoxicity as a result of combining alprazolam with their usual narcotic pain relievers. Only three patients developed minimal sedation. This was not considered bothersome, and it remitted within five days of the start of treatment.

Regardless of the degree of improvement in their psychiatric problems, all the patients in the study maintained their analgesic response throughout the period of alprazolam treatment. Moreover, the pain returned when the alprazolam was discontinued but subsided when the drug was reinstituted.

The results suggest that to control some types of pain, specifically those involving nerve injuries, alprazolam may be useful when combined with traditional narcotic pain relievers, the authors conclude.

"Analgesic Effect of Alprazolam in Patients With Chronic, Organic Pain of Malignant Origin," Francisco Fernandez, M.D., et al., Department of Internal Medicine, St. Luke's Episcopal Hospital, Tex., Journal of Clinical Psychopharmacology, Vol. 7:3, June 1987, pp. 167-179.

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DIRECTOR OF HOSPITAL PHARMACY WANTED: For 47-bed hospital located in Beaufort County. Salary: Low 40's. Qualifications: Two years experience in hospital pharmacy, working w/unit dose IV Admixtures. Must have NC license and CME. Contact: Ken Lopez at (504) 524-3179.

STAFF PHARMACIST WANTED: Position at Kings Mountain Hospital. Modern 102-bed facility with computerized unit dosage. Hospital experience preferred but not necessary. Will consider a May graduate. Contact Jerry McKee at (704) 739-3601 Ext. 472

The department of Pharmacy Services at Sampson County Memorial Hospital has opportunities available for hospital pharmacy practice. This 145 bed JCAH approved hospital is located within 1 hour drive of the coast. Good working conditions with Nursing and Medical Staff. Excellent starting salary, plus comprehensive benefit package. Activities include complete computerization, unit dose, IV admixture, patient profile and inventory control. Patient care services include: antibiotic monitoring, TPN, Aminoglycoside dosing and support for continuing education. Contact: Patricia Britt, director, Personnel or Jenny Strickland, Director Pharmacy at (919) 592-8511.

PHARMACISTS NEEDED: Due to expansion, pharmacists are needed 1st and 2nd shifts. Pharmacy is decentralized with unit dose and IV-Ad mixtures. Other services include: nutrition support and drug information. Salarys are negotiable depending on experience. For more information send resume or call collect: Letha Huffman, NC Baptist Hospital, 300 S. Hawthorne Road, Winston Salem, NC 27103. (919) 748-4717. EOE.

PHARMACIST WANTED: Director of Pharmacy for 64-bed hospital in Southeastern North Carolina. Excellent hours, salary negotiable, and good fringe benefits. Contact Tom Smart at (919) 582-1776.

DIRECTOR OF PHARMACY: Pungo District Hospital in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Phar-

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Continued from page 34

macy. Salary negotiable and commensurate with experience. Interested parties should contact the administration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

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STAFF PHARMACIST WANTED: Staff Pharmacist needed for Highsmith Rainey Hospital, Fayetteville. Contact Sam Hauser, (919) 483-7400, Ext. 172.

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PHARMACISTS WANTED: Full-time pharmacists needed for Eckerd stores in Albemarle, High Point, Salisbury and Spencer, North Carolina. Interested parties may call (919) 882-8412 or (919) 841-7308 to set up interview date and time.

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PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

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Continued from page 35

NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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WANT TO BUY: This Iowa pharmacist licensed in NC would like to purchase a pharmacy in Eastern NC. Strictly confidential. If you are interested in selling your pharmacy, please contact Box RTU, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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NCPhA's 108th President, 1988-89, Albert Fulton Lockamy, Jr. (See story on page 9.)

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PRESIDENT'S REPORT 1987-88

I would like to report to you that the North Carolina Pharmaceutical Association is ALIVE AND WELL, AND BUSY! In this report, I would like to point out some of the major activities of your association for the past year. As we review these achievements, please keep in mind that without your support, none of these activities would have been possible. It is only through the coordinated efforts of the members that your association can serve you.

One of the highlights of this past year was the passage of the doctor dispensing bill in the legislature, which would require dispensing doctors to register with the Board of Pharmacy and follow the same laws that are in the Pharmacy Practice Act. This legislation did not just happen! I cannot tell you how important the grass root lobbying by our members across the state was. Our professional lobbyist, Virgil McBryde, did an excellent job for us, as did our legislative committee headed by Jimmy Jackson. Many of us spent several days in Raleigh talking to legislators and explaining this bill to them. Our own pharmacist legislators were also of great help in getting this bill passed. My thanks to all who helped in getting the doctor dispensing bill passed, for a job well done!

In October of last year, our first Endowment Fund dinner was held. Thanks to the efforts of Milton Whaley and his committee, $17,000 was raised for the Endowment Fund of the NCPhA. The Endowment Fund revenue helps offset some of the expenses of operating your association. Since the dinner was so enjoyable and successful, plans are to make the Endowment Fund dinner an annual affair.

The NCPhA continues to serve its members by offering Major Medical, professional liability, disability, and an umbrella policy for store owners' insurance. Over 2000 pharmacists and employees in the state are covered by insurance at a much better rate than could be offered to a small group. Not only does each individual benefit from lower insurance rates, but your association benefits financially from the arrangement with the insurance companies. Betsy Mebane does a super job in coordinating the insurance program which is a benefit to all.

The Museum Committee, headed by W. J. Smith, continues to stay busy in preparation for the opening of a 1925 Pharmacy in the new 50,000 sq. ft. museum that the state will build. Groundbreaking for the $25 million facility is set for July 6, 1988. The 1925 era pharmacy will be 28 ft. wide and 56 ft. deep. The total floor space allocated for us is 1558 sq. ft. The pharmacy will include an operational soda fountain, prescription department, including drugs of that era, camera, candy, tobacco, cosmetics, patent medicines, drug sundries and other merchandise common to a 1925 pharmacy. If you have any merchandise from this era that you would be willing to donate, please contact W. J. or the Institute. Our thanks to this large committee for their ongoing efforts!

We should all take pride in the NCPhA Student Loan Fund. Our association has, by far, the largest loan fund of this type in the country. Last year, your association made 178 loans to students of pharmacy in North Carolina. This past year, the Executive Committee voted to make the Campbell University pharmacy students potential candidates on a pro-rata basis for monies in the loan fund. I received a very nice letter from Norman A. Wiggins, president of Campbell University, expressing his personal appreciation for including Campbell pharmacy students as potential loan candidates. President Wiggins also expressed gratitude for support and encouragement of the NCPhA in the establishment of the Campbell University School of Pharmacy. IT IS NICE TO BE APPRECIATED!

Special thanks go the NCPhA Ladies Auxiliary. Through their efforts and monies they have

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The following were adopted by the North Carolina Pharmaceutical Association in convention assembled, May 21, 1988, Asheville, North Carolina.

RESOLUTIONS

NCPhA Resolutions Committee
David R. Work, *Chairman*
Robert S. Beddingfield
Kathleen M. D'Achille
Virginia L. Lockamy
John R. Setzer

RESOLUTION NUMBER 1
TITLE: PHARMACEUTICAL SERVICES IN JAILS
SOURCE: PUBLIC HEALTH COMMITTEE

WHEREAS
the North Carolina Pharmaceutical Association has traditionally encouraged its members to participate in a broad spectrum of professional services; and

WHEREAS
there are efforts in many areas of North Carolina to improve the quality of health services in city/county jails; and

WHEREAS
the providing of medications is an integral part of the health care programs in city/county jails; and

WHEREAS
pharmacists are knowledgeable about medication systems and the appropriate administration of those systems;

NOW THEREFORE BE IT RESOLVED THAT
pharmacists in North Carolina are encouraged to explore opportunities for providing constructive professional guidance and assistance to the health care programs of city/county jails, and

BE IT FURTHER RESOLVED THAT
the North Carolina Pharmaceutical Association: 1) shall actively provide educational and technical assistance to pharmacists who engage in or wish to engage in this or any other related professional activity, 2) shall actively seek the endorsement, support, and cooperation of the North Carolina Sheriff's Association and the North Carolina Association of County Commissioners for this professional service, and 3) establish an *ad hoc* committee to study the distribution and control systems of pharmaceuticals in city/county jails and the state prison system.

May, 1988

RESOLUTION NUMBER 2
TITLE: RECORDS REVIEW IN HEALTH DEPARTMENTS
SOURCE: PUBLIC HEALTH COMMITTEE

WHEREAS
pharmacists in many areas of North Carolina are providing professional supervision for registered nurses who have limited privileges to dispense medications in local health departments clinics; and

WHEREAS
North Carolina Board of Pharmacy Rule 21 NCAC 46.2401(g) requires that the pharmacist-manager shall verify the accuracy of dispensing records at least weekly; an exception being where health department personnel dispense to 30 or more patients in a 24-hour period per dispensing site and the pharmacist-manager shall then verify the accuracy of the dispensing records within 24 hours after dispensing occurs; and

WHEREAS
the 30 patient/24-hour review requirement of the rule is being viewed by a number of professionally-conscientious pharmacist-managers as being unreasonably difficult to comply with due to the logistics of notification and scheduling;

continued on page 6

David Work, Chairman, Resolutions Committee

RESOLUTIONS

Continued from page 5

NOW THEREFORE BE IT RESOLVED THAT the North Carolina Pharmaceutical Association hereby expresses its support for actions to amend Rule 21 NCAC 46.2401(g) to permit the planned, predictable scheduling of records review based upon local needs and resources.

RESOLUTION NUMBER 3
TITLE: PHARMACISTS' AWARENESS OF TUBERCULOSIS IN ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) PATIENTS
SOURCE: PUBLIC HEALTH COMMITTEE

WHEREAS
pharmacists in North Carolina have an important role in the treatment of AIDS and complications such as Tuberculosis, and

WHEREAS
pharmacists in North Carolina need guidelines for handling certain prescriptions that are intended for the treatment of tuberculosis,

NOW THEREFORE BE IT RESOLVED THAT every pharmacy in North Carolina be sent a copy of "Guidelines for handling Tuberculosis and Prescriptions"

RESOLUTION NUMBER 5
TITLE: PATIENT COUNSELING
SOURCE: SOCIAL & ECONOMIC RELATIONS COMMITTEE

WHEREAS
it has been demonstrated that patient compliance with drug treatment can be improved through interaction with the pharmacist; and

WHEREAS
patients need and desire information regarding drug therapy; and

WHEREAS
pharmacists are recognized as the expert in drug therapy:

NOW THEREFORE BE IT RESOLVED THAT patient counseling, where appropriate, be part of the standard of care in the delivery of pharmaceutical services and that all employers provide the resources, environment and time for patient counseling.

RESOLUTION NUMBER 6
TITLE: SUPPORT FOR NORTH CAROLINA BOARD OF PHARMACY
SOURCE: SOCIAL & ECONOMIC RELATIONS COMMITTEE

WHEREAS
through the efforts of the North Carolina Pharmaceutical Association, Senate Bill 784 was enacted regulating physician dispensing; and

WHEREAS
the North Carolina Board of Pharmacy interpreted rules and regulations to protect public health and welfare consistent with the North Carolina Pharmacy Act;

NOW THEREFORE BE IT RESOLVED THAT in convention assembled the North Carolina Pharmaceutical Association does endorse the North Carolina Board of Pharmacy's interpretation of rules and regulations governing physician dispensing and supports it in the suit: *Hall et al vs. North Carolina Board of Pharmacy.*

RESOLUTION NUMBER 7
TITLE: FREEDOM OF CHOICE
SOURCE: SOCIAL & ECONOMIC RELATIONS COMMITTEE

WHEREAS
it is the patient's right to have freedom of choice for the delivery of all health care services; and

WHEREAS
certain third party programs clinicians and/or institutions may restrict the patient's choice regardless of convenience, quality or other priorities:

NOW THEREFORE BE IT RESOLVED THAT the North Carolina Pharmaceutical Association supports and encourages the patient's right to choose a pharmacy for the delivery of pharmaceutical services.

RESOLUTION NUMBER 10

TITLE: HOUSE OF DELEGATES TASK FORCE

SOURCE: NORTHWEST PHARMACISTS' ASSOCIATION

WHEREAS
the North Carolina Pharmaceutical Association has traditionally encouraged its members to participate in Association activities and processes; and

WHEREAS
there has been a renewed interest in participation in local pharmacy organizations, as evidenced by the existence of approximately twenty-five such groups in North Carolina; and

WHEREAS
there is an urgent need for pharmacists to work together to address issues that require immediate action, as well as to engage in long-term planning for our profession; and

WHEREAS
the North Carolina Pharmaceutical Association would be the ideal forum for such activity to occur if a mechanism existed for formal input from and representation of the local associations and other pharmacy organizations; and

WHEREAS
a House of Delegates or some similar structure would broaden the base of member involvement and provide a means for the development of Association leadership through the local associations up to the state level; and

WHEREAS
such a structure would assure diversity and broad geographical representation at the Annual meeting, provide for greater control over the voting process, and allow increased member input in the policy-making process, since each delegate or representative would represent a constituency rather than an individual vote;

NOW THEREFORE BE IT RESOLVED THAT
the North Carolina Pharmaceutical Association convene a Task Force comprised of Association members to consider the establishment of a House of Delegates or similar structure and report its recommendations to this body at the Annual Convention, 1989.

RESOLUTION NUMBER 11

TITLE: PAY FOR CLAIMS PROCESSING

SOURCE: TOM THUTT

WHEREAS
pharmacies are paid on a fee basis, and

WHEREAS
negotiations with third parties on fees is not possible, and

WHEREAS
third parties do not compensate pharmacies for record keeping and billing

THEREFORE BE IT RESOLVED
that this association go on record in opposition to any requirement that pharmacies pay for claims processing, and

BE IT FURTHER RESOLVED
that the Association inform third parties that insurers should be responsible for the cost of processing their claims.

RESOLUTION NUMBER 12

TITLE: PENALTY FOR PAYMENT DELAYS

SOURCE: TOM THUTT

WHEREAS
delays in payment by third party payors of pharmacy claims of over 30 days are becoming increasingly prevalent, and

WHEREAS
these delays have adversely affected the cash flow and credit rating of some pharmacies

THEREFORE BE IT RESOLVED THAT
the Association request the legislature to pass a prompt bill requiring that for all claims not paid within 30 days of proof of receipt by the third party, the third party pay interest (such as 18% annually) to the payee.

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RESOLUTIONS

Continued from page 7

CONSTITUTIONAL AMENDMENT

Presented at the 1987 Annual Convention and adopted at the 1988 Annual Convention, May 21, 1988, Asheville, NC

TITLE: MEMBERSHIP OF THE ETHICS, GRIEVANCE AND PRACTICE COMMITTEE

SOURCE: ETHICS, GRIEVANCE AND PRACTICE COMMITTEE

WHEREAS
disciplinary action by the Ethics, Grievance and Practice Committee as authorized by the Constitution of the North Carolina Pharmaceutical Association can have substantial impact on the disciplined member, and

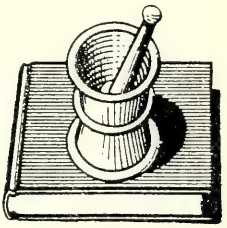
WHEREAS
all disciplinary action by the Ethics, Grievance and Practice Committee should be administered in a consistent and equitable manner, and

WHEREAS
variation in disciplinary action can be minimized by staggered four year terms of Committee members, therefore

BE IT RESOLVED
the North Carolina Pharmaceutical Association adopt the following constitutional amendment to alter the manner in which the Ethics, Grievance and Practice Committee members are appointed.

ARTICLE III, SECTION 2 — ETHICS, GRIEVANCE AND PRACTICE COMMITTEE
The Ethics, Grievance and Practice Committee is the judicial division of the Association and shall be composed of five members, *one of whom shall be the current Second Vice-President of the Association. The first year, the President of the Association shall appoint four committee members and shall designate one, two, three or four year terms, respectively. Thereafter, one new member shall be appointed by the President annually for a four year term. The Executive Director of the Association shall serve as an* ***ex officio*** *member of the Committee.* It shall be the primary responsibility of the Ethics, Grievance and Practice Committee to develop written criteria for membership and interpret and enforce the Association's Code of Professional Ethics according to the provisions of the Bylaws and procedures duly adopted by the Committee. The Committee shall also serve to advance the practice standards of the profession of pharmacy.

(Changed wording appears in italics.)



CHARLOTTE WOMAN'S AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary met for a luncheon meeting at the home of Mrs. Charles Pender, Tuesday, May 10, 1988. Mrs. Don B. Robinson, president, called the meeting to order and welcomed members. The devotional was given by Virginia Steele.

Mrs. Leslie H. Davis, State President of the Woman's Auxiliary, reported on the convention to be held in Asheville, May 18th to 21st.

Three members were honored with Life Memberships for their years of faithful service. Dollie Corwin presented the memberships to the following: Marguerite Colina (Mrs. Gilbert) 38 years; Myrtle Pender (Mrs. Charles) 28 years; Jewell Oxendine (Mrs. Jesse) 14 years.

Using a candle ceremony, Jewell installed the following officers for 1988-89: President — Dollie Corwin; 1st Vice President — Mary Lou Davis; 2nd Vice President — Betty Smith; Secretary — Virginia Steele; Treasurer — Evelyn Henley; Historian — Laura Cannon; Parliamentarian — Jewell Oxendine; Advisor — Margaret Robinson.

Jewell Oxendine presented Margaret Robinson a gift of appreciation for her work as president of the Auxiliary.

Virginia Steele
Secretary

THE PRES WITH LOTS OF PRESS

When Albert "Al" Fulton Lockamy, Jr. has something to say, people listen. Now that Al has filled the position as the 1988-89 president of NCPhA, pharmacists across the state will have to listen to a lot more of what Al has to say.

Since Al began practicing as a community pharmacist in 1964, he has been widely quoted and sought after for interviews by the press. His insights and comments on community pharmacy practice have been published in *The Raleigh News and Observer, The Raleigh Times, The NC Leader, The Sampson Independent* and most recently, *The New York Times Magazine* and *Senior Care.* Al has also been featured guest on WRAL-TV and WUNC and WPTF radio programs. In fact, he has already been scheduled to reappear on *The People's Pharmacy* radio program during the 1988 Pharmacy Week this October.

People who know Al are not the least surprised why this Revco pharmacist has become such a popular person to interview. Besides the fact that Al has held significant leadership positions, such as past president of the Wake County Pharmaceutical Society and has been honored as the Revco National Pharmacist of the Year and the first "chain pharmacist" to receive the Syntex North Carolina Practitioner-Instructor of the Year Award, his ebullient enthusiasm towards his work is a natural attraction. His customers think so and so do others.

Recently, Al attracted Joe Graedon, author of *The People's Pharmacy* and *Fifty Plus,* to his Revco Drug Store located in Hechinger Plaza at 3151 North Boulevard in Raleigh. After observing Al at work for a day, Mr. Graedon imparted the following, "Al Lockamy is a very considerate, counseling pharmacist. If all pharmacists treated their customers this way, there would be no mail order or physician dispensing."

Al's enthusiasm for pharmacy also carries over at home as he is married to pharmacist, Virginia "Ginger" Lee Lockamy. Al and Ginger have two children, Ginny, age 10 and Elizabeth, age 5. In this two pharmacist family, Al and Ginger have managed to juggle both family and professional commitments equally well. Besides supporting Al with his professional career, Ginger stays busy by being involved in many civic activities. Ginger is even busier these days as she is currently the state Membership Chairman for the Junior Women's Club of North Carolina. Yet, as full as her schedule may be, Ginger always allows time to accompany Al to professional meetings, conventions, and other professional functions. The children are also included whenever possible.

Al started preparing to be NCPhA's 108th president early in 1986 when he was elected First Vice-President. Since then, Mr. Lockamy has served as an official NCPhA delegate for the 1987 APhA Convention in Atlanta and has attended the "1987 Leadership Training Conference" for presidents-elect of state pharmacy associations sponsored by Marion Laboratories. He also participated in the Annual Meeting of the Southeast Pharmacy Officers Conference in 1987 and the 1988 North Carolina Pharmacy leaders Forum.

Someone once described Lockamy as a "goer" and a "doer." Lockamy's goals as the 108th president of NCPhA certainly support this description accurately. When asked what he hopes to accomplish during his year as president of NCPhA, Al enumerated his goals as follows:

- ". . . provide more services to more pharmacists by increasing membership,
- increase communication among NCPhA members,
- support the continued cooperation between NCPhA, NCSHP, UNC-CH School of Pharmacy, Campbell University School of Pharmacy, and the NC Board of Pharmacy,
- facilitate increased activity in the Academy of Consultant Pharmacists, and
- increase NCPhA Committee activities and involvement."

Some specific issues discussed during the 1988 NCPhA Annual Convention that Mr. Lockamy will have to address during his term as president of the association are:

- the pros and cons of establishing a House of Delegates,
- a proposal to revise the makeup of the Executive Committee, and
- how the NCPhA Constitution and Bylaws can be amended.

Other issues, facing the profession as a whole, which also affect North Carolina pharmacists, will offer additional challenges for Al Lockamy; such as, the inadequate reimbursement for pharmacist services, the encroachment into professional perogatives from others outside the

continued on page 11

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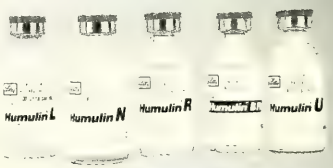

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THE PRES

Continued from page 9

Pharmacy profession, the need to increase legislative and regulatory action affecting Pharmacy, and the inadequate supply of pharmacists.

Indeed, Al Lockamy will be busy with the sizeable agenda that lays before him. The upcoming year promises to be both an exciting and challenging one in every way. A combination of Al's exceptional communication skills and his competent leadership, together with the members' support, is sure to make this year a guaranteed success!

Standard Symbol Sought to Identify U.S. Pharmacies

Representatives of major national pharmacy organizations gathered on May 24, 1988, at a meeting convened by the American Pharmaceutical Association (APhA) to discuss the question of developing a standard symbol to identify pharmacies in the United States.

A consensus was reached by meeting participants to explore the development of a standard symbol. Participants will reconvene this fall for further discussion of a standard symbol, including the design of the symbol or sign, that will serve as "one symbol for pharmacies".

The proposal for a standard symbol was introduced by Irving Rubin in 1986 upon his acceptance of the Remington Honor Medal. Rubin observed, "A symbol is an important piece in the jigsaw puzzle of professional recognition for Pharmacy. By working together and creating 'One Symbol for Pharmacy' — which will be displayed prominently on the exterior of all pharmacies — we will perform a constructive service for the public and the profession."

Research conducted by APhA has revealed that less than 50 percent of pharmacies in the U.S. include any symbol on exterior signs to identify the pharmacy. Also, over 50 percent of the members of APhA and NARD surveyed at their respective conventions indicated a high level of interest in developing "a single universally accepted sign of pharmacies."

A worldwide survey of national pharmaceutical associations conducted by APhA staff has revealed that no less than 20 countries have adopted a standard symbol or sign for pharmacies. As early as 1936, the "A" for "apotheke" (pharmacy) was adopted in Germany, and in 1942 the green cross with a bowl of Hygeia superimposed was officially adopted by the French.

Since then, countries that have adopted a standard sign for pharmacy include Australia, Austria, Canada (Quebec), Denmark, Great Britain, Hong Kong, Italy, New Zealand, The Netherlands, Nigeria, Norway, Portugal, Spain, Sweden and Switzerland. The signs vary from green crosses to bowls of Hygeia, and from mortars and pestles to the R symbol.

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REPORT OF THE PUBLIC HEALTH COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

May 9, 1988

Dear Fellow Pharmacists:

Recently, we have seen an increase in the number of AIDS cases in North Carolina. Some of you may be providing medicine for these patients in your own community. As you are aware, due to their immunocompromised state, these individuals have special medical needs and are at a greater risk for infection and disease than the average patient.

One such disease is tuberculosis. Although TB no longer runs rampant in our society, it still poses a health threat with 662 cases reported in North Carolina last year. Health officials predict that this number may increase substantially, paralleling the rise in AIDS, since AIDS patients are particularly susceptible to the pathogenesis of TB. With this thought in mind, the Public Health Committee of NCPhA would like to remind you of your important role in the treatment of the TB patient.

As pharmacists, we need to be well informed on how to handle new prescriptions for TB drugs and to monitor the course of therapy. Our role should not be to simply fill and dispense the medications but also to acquire information about the patient. For instance, upon initially receiving a prescription for a TB medication, we should ascertain certain key facts which are enclosed with this letter. Additionally, if we determine that a person cannot afford their medicine, we should see it as our obligation to inform them that drugs and treatment are available at their local health department free of charge. This is especially important since many of these patients might fail to get treatment otherwise. Therefore, they not only pose a health threat to the community but could eventually die of complications.

The committee recognizes that it will require a special effort on your part as well as possible loss of revenue for your pharmacy and appreciates your support in directing these patients to their local health department for treatment and tracking.

Sincerely

Seth G. Miller
Suzy Conner
NCPhA Public Health Committee

CURRENT DRUGS FURNISHED BY HEALTH DEPARTMENTS

1. INH
2. Pyridoxine
3. Rifampin
4. Rifamate
5. Ethambutol
6. Pyrazinamide
7. Ethionamide
8. Cycloserine
9. Streptomycin
10. Kanamycin
11. Capreomycin
12. PAS
13. PPD

GUIDELINES FOR HANDLING TB DRUGS AND PRESCRIPTIONS

A. If patient is Active TB (actually has the disease). It is required by state law to be reported to the health department in county of residence.

   1. All drugs are furnished free of charge by health department.
   2. Patient is required to be followed by the health department.
   3. Patient may be jailed if not meeting requirements set by health department.
   4. Patient is required to furnish a list of contacts.

B. If patient is a Reactor (reacts to positive Mantoux Skin Test). It is not required by law to report Reactors, but is preferred by health department.

   1. All drugs are furnished by health department.
   2. Patient may meet check-up visits at health department.
   3. Patient does not face litigation if not meeting schedule set by health department.
   4. Patient will have follow-up X-Ray.

May, 1988

KEY FACTS

1. Whether the prescription is intended for use as an anti-TB medication (some drugs, i.e., Rifampin, may also have other indications).
2. By whom the patient is being treated and whether or not the patient plans to continue seeing that same physician. (TB often requires a long period of treatment and it is important that a patient continues uninterrupted treatment in order to get well).
3. Whether or not this patient's disease (if TB) has been reported to the state or local health officials. (TB is a reportable communicable disease in North Carolina).
4. Whether contacts or relatives of this patient have received skin tests. (Since TB is highly contagious, it is important that anyone close to the patient be checked in case they may need treatment as well).

Seth G. Miller, *Chairman*

Ruth Baldwin	James L. Creech
Linda Burke	Neil McPhail
Laura G. Burnham	James Ray Oakley
Steve Caiola	Rebecca Rowell
Suzy Conner	Charles Reed, Consultant

LETTER TO THE EDITOR

May 18, 1988

North Carolina Pharmaceutical Assn.
A. H. Mebane, III, Exec. Dir.
P. O. Box 151
Chapel Hill, NC 27514

Dear Al:

As we rollout the PCS Recap system, we want you to be well informed regarding the pertinent issues. Recently, some very misleading information has been circulated and has caused some confusion. We at PCS feel that it is important that you and your members are aware of the facts:

1. The Recap system was developed to address the needs of third party payers (plan sponsors). Plan sponsors needed the provider pharmacies to have constant access to the current cardholder data base files. Prior to the Recap system, these needs could be met only in an "alternative" pharmacy environment that locked out both PCS and our member pharmacies.

Now, the Recap system can accommodate such programs in a network of community pharmacies. This allows PCS and our member pharmacies to retain (and gain) market share that might otherwise have been lost.

2. The Recap system has also been designed to provide improved service to pharmacies. Recap pharmacies experience no rejected claims. Furthermore, they receive faster payment.
3. PCS feels that computerized pharmacies should be able to use their computers to perform Recap processing. A separate point-of-sale terminal should not be necessary. Over the last 2 years, we have provided specs for Recap-capable software to nearly 200 pharmacy software vendors. Many of these vendors have completed their software development; others have not. Only their customers (the pharmacies) can create the demand. We encourage pharmacies to contact their software vendors now. We will gladly cooperate with all vendors.
4. On-line processing is more costly than processing claims on paper or magnetic tape. The additional costs are being *shared* by PCS, plan sponsors and participating pharmacies.

Significant changes are taking place in the third party marketplace. On-line processing will soon be the standard for those who wish to compete effectively. The Recap system gives a competitive edge to community pharmacies, and to PCS, as we strive to keep the third party prescription business in a retail setting.

Sincerely,
Richard J. Walter, R.Ph.
Manager
Professional Relations
PCS, Inc.

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CONVENTION HIGHLIGHTS

President Al Lockamy (right) presenting the President's plaque to Past-President Julian Upchurch (left). Photo by Colorcraft

Ribbon Cutting Ceremony at the opening of the Exhibitors' Program conducted by Past-President Julian Upchurch (center). Photo by Colorcraft

RECOGNITION OF THE 1988 CONVENTION EXHIBITORS & CONTRIBUTORS

The North Carolina Pharmaceutical Association gratefully acknowledges the cooperation and support of the following organizations who have generously contributed to the success of our 108th Annual Convention.

Without such support, it would be almost impossible to produce such an event which provides not only education, information and increased competency in the practice of our profession, but also offers the opportunity for the exchange of ideas, renewal of old acquaintances, and the making of new friendships.

As a team, we can accomplish much more than individuals. These people are definitely part of our team.

We urge each and all of our members to express their appreciation to these supporters.

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REPORT OF THE CONSOLIDATED STUDENT LOAN FUND COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

The purpose of the Consolidated Student Loan Fund is to provide emergency financial aid to students enrolled in the Schools of Pharmacy at the University of North Carolina at Chapel Hill or Campbell University. The maximum amount that can be loaned is $300.00 per semester.

During 1987, $53,400.00 was provided in 178 loans. The fund received $13,735.38 in contributions. The value of outstanding loans is $135,390.00. Total assets of the fund is $174,949.19.

There are 84 named funds within the Consolidated Loan Fund. A number of these are inactive. Dealing with so many funds creates a problem for the staff so the committee recommended that the inactive funds, which have no one for a loan recipient to respond to, be consolidated into an undesignated fund. The committee also recommended that fund sponsors be asked to bring their fund minimum up to at least $300.00 since that is the amount of the average loan.

The committee will conduct a fund raising drive this fall no later than October 1, 1988. The letter for this campaign will include statistics and the activity of the fund, the philosophy of the fund, and will solicit a unified fund for students attending both Schools of Pharmacy mentioned above. The committee proposed asking the Executive Committee of the Association to approve its recommendation that the fund be appropriated between the two schools on a per capita basis.

(The NCPhA Executive Committee approved the recommended appropriation as well as the fund drive at its April 17, 1988 meeting.)

Respectfully submitted,

Donald V. Peterson, *Chairman*

Suzanne Blaug
Howard Q. Ferguson
J. Howard Garrett
Robert B. Hall
Joseph L. Johnson, Jr.
Banks Kerr
Ronald W. Maddox
A. Wayne Pittman
Ralph P. Rogers, Jr.

May, 1988

North Carolina Pharmaceutical Association
Consolidated Pharmacy Loan Fund 12/31/87

No. of Loans Made	178
Total Value of Loans	$53,400.00
Average Value of Loans	300.00
Contributions to Fund	13,735.38
Investments	1,012.50
E.F. Hutton Money Market Act.	28,299.00
Cash in Bank	10,247.69
Values of Loans Outstanding	135,390.00
Total Assets of Fund	174,949.19

*This includes interest due to NCPhA General Fund but will not be withdrawn until audit is completed.

Tom Sanders, Chairman of the T.M.A. Foundation, presents a check for $1,500.00 for the TMA Student Loan Fund to Al Mebane, Executive Director, NCPhA. The TMA Student Loan Fund, established in 1978, now has a value of over $13,000.00 and is one of the fastest growing and most active of the many funds in the Consolidated Student Loan Fund, administered by the NCPhA. Thanks, TMA Foundation for your generosity.

MY FUTURE IN COMMUNITY PHARMACY

by Eugene G. Brown, III
4/5 UNC Pharmacy Student
Essay for consideration for the Ralph P. Rogers Pharmacy Administration Award

Retail pharmacy is becoming very competitive. To continue growth, retail pharmacists need to expand further into two areas of pharmacy. To begin, I believe that the successful pharmacist of tomorrow must offer a more individualized and specialized service to the customer. The pharmacist must not only be a drug provider/consultant, he must also strive to be more of an all-around health professional.

The pharmacist should become more involved with the day to day health needs of his clientele. Such an outreach may include involvement in the treatment of minor illnesses and injuries as well as evaluating the physical and nutritional needs of his public. Diabetes and cholesterol screening clinics and hypertension management programs are prime areas in which the pharmacist may extend his services. Involvement centering around nutritional education (i.e. low cholesterol or low salt diets) could be extremely beneficial to the patient.

In addition, expansion into home health care will support the changing role of the pharmacist. The twenty-first century pharmacist must vacate his classical "behind the counter approach", and move into the homes and care facilities of the elderly. Steps such as these will ensure the future of community pharmacy.

A second area of concentration involves the pharmacist being a better manager of business. With the influx of so many drug stores in the last few years, pharmacy has become a very competitive business. The pharmacist must be very efficient and budget-minded; he must make sure that waste is kept to a bare minimum. He should be adept at sales and marketing, in order to increase traffic, sales and ultimately profit.

Community pharmacy is a very unique field. It involves the pharmacist in the two different roles of health provider and business manager. The successful community pharmacist will excel in both areas. Although the care of the patient is most important, the pharmacist must be able to operate an efficient business in order to afford such health care. Many pharmacists of today worry too much about profit margins and serving customers in an expedient manner just to get to other customers. The pharmacist needs to realize that once a person leaves the physician's office he is still a patient and not just a consumer of goods. Good businessmen realize that by offering a quality product with individualized attention, profits will soon follow.

As I was raised helping my father in his small, independent pharmacy, I already have seen the profession change immensely. The increase in the number of chain drug stores and the increase in third party intervention, I feel, has dampened some of the professionalism of pharmacy because of increased competition and decreased profit margins. While effective administration of the business is mandatory, I think that the pharmacist needs to go that extra yard, and lift a caring hand out to his patients. With a minimum of personal effort I feel that pharmacists will be substantially rewarded, and this is where "My Future in Community Pharmacy" will be aimed.

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NORTH CAROLINA PHARMACEUTICAL ASSOCIATION
STATE OF NORTH CAROLINA
DEPARTMENT OF REVENUE
RALEIGH
SALES AND USE TAX REGULATION 34

SUBJECT: ORTHOPEDIC APPLIANCES

(a) Sales of crutches, artificial eyes, hearing aids, false teeth, eyeglasses ground on prescription of physicians or optometrists, pulmonary respirators sold on prescription of physicians (whether worn on the person or not), and other orthopedic appliances when the same are designed to be worn on the person of the owner or user, are **exempt** from sales and use tax.

Other items which are deemed to be **tax exempt** orthopedic appliances are as follows:

1. Abdominal Belts
2. Artificial Noses and Ears
3. Cervical Braces
4. Clavicle Splints
5. Crutch Tips
6. Crutches
7. Dorsolumbar Supports
8. Elastic Anklets
9. Elastic Arch Binder
10. Elastic Arch Brace
11. Elastic Bandage
12. Elastic Hose
13. Elastic Wrist Bands
14. Head Halters
15. Invalid Walkers
16. Lumbosacral Supports
17. Maternity Supports
18. Obturators for Cleft Palate
19. Post-operative Supports
20. Rib Splints
21. Sacroiliac Supports
22. Shoulder Braces
23. Spinal Braces
24. Stryker Frames
25. Suspensories
26. Traction Device
27. Trusses
28. Walking Canes
29. Wheel Chairs
30. Hip Prosthesis
31. Bone Nails
32. Artificial Heart Valves
33. Artificial Arteries
34. Iron Lungs
35. Cervical Neck Collars
36. Leg Braces
37. Ostomy Bags, Discs, Tubes & Belts
38. Artificial Limbs

(b) The items listed below are NOT orthopedic appliances within the meaning of G.S. 105-164.13 (12) and are subject to the 3% rate of sales or use tax when sold to users or consumers:

1. Athletic Supporters
2. Ball O Foot Cushions
3. Bunion Protector
4. Bunion Reducer
5. Foot Cushion
6. Heel Cushions
7. Moleskin
8. Shoe Insoles
9. Toe Flex
10. Walk Strate Pads
11. Wigs
12. Ostomy Cements & Removers, Powders, Germicides and Similar Supplies
13. Heating Pads
14. Heat Lamps
15. Oxygen Regulators (Medical)
16. Oxygen Tents
17. Vaporizers

Note: The foregoing is a true copy of Sales and Use Tax Regulation 34, which was promulgated and became effective May 14, 1962. It was amended on August 26, 1969, October 8, 1971 and December 9, 1974. This regulation and all amendments thereto have been approved by the Tax Review Board and Filed in the office of the Secretary of State as prescribed by Law.

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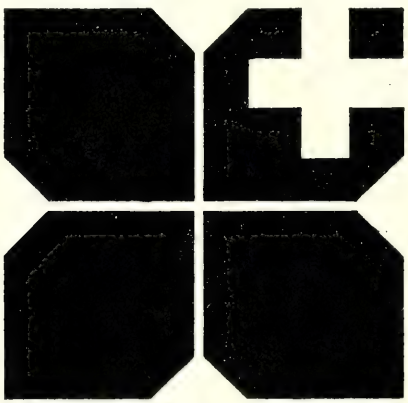

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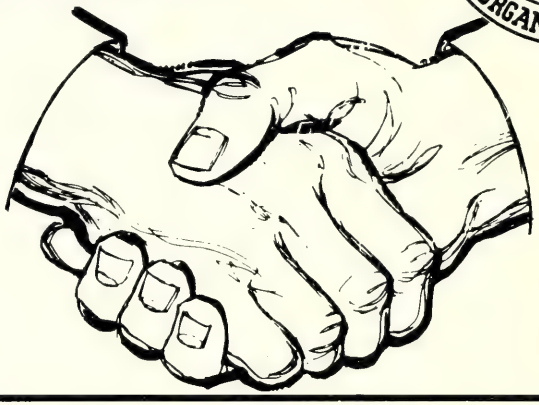

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DICKINSON'S PHARMACY
by Jim Dickinson

I was wrong. "Every time a pharmacist is successful in defending a plaintiff's claim that the pharmacist had a 'duty to warn' of potential adverse reaction to prescribed drug therapy another strike is made against the idea that pharmacy is a profession."

So writes R. Tim Webster, executive director of the American Society of Consultant Pharmacists, in response to a recent column that hailed the reversal of *Leesley v. West* in Illinois.

That case, it may be remembered, would have required pharmacists to dispense the manufacturer's professional labeling insert with every prescription. A higher court reversed that ruling, and I described the reversal in the context of "a season for renewal."

Tim disagrees, and he is right. "The only renewal associated with these pyrrhic court 'victories' is a renewal of the contention that pharmacy is only a business of selling drugs," he instructs.

"In short, there is no professionally-rewarding, well-compensated future in simply selling drugs. Only through providing full drug-use information services (patient counseling) and being held responsible for the information provided can pharmacists hope for a renewal of the public's perception of pharmacy as a profession."

This is sound advice. But, like a lot of sound advice it may be hard for some on the frontline of the marketplace health wars to follow.

Take Gary Fragale, of Mannington, West Virginia, who like thousands of independents everywhere is so beleaguered by the deadly combination of third-party payors and discount chains that he's preparing to take out an osteopathic medical degree so that he can provide one-stop, street-front medical services as well as prescriptions.

Or take Marty Rubin, in San Antonio, Texas, who's coming to the bleak conclusion that HMOs will never buy pharmacy's counseling role, unless and until a strong patient demand for it is generated by pharmacists who realize that their independent practice is doomed without it.

What I was attempting to say about *Leesley v. West* was that its reversal provided relief from a progression of decades of oppressive liability burdens on pharmacists, and as such was a sign of a turning tide in liability decisions.

After Tim's rebuke, I went back to Professor David B. Brushwood, J.D., Pharm.D., who had first drawn my attention to *Leesley.*

That's when I learned that I had misconstrued the narrowness of the case. Leesley originally upheld the duty to warn in a context of drug *choice* (i.e., the patient's right to be frightened out of using the drug at all), versus the duty to warn in the context of drug *use* (patient's right to be counseled about utilization issues).

The two are poles apart, Professor Brushwood points out, and although the courts are retreating as I observed from making new law in such matters, a pending case in the Washington State Supreme Court is likely to strengthen the counseling cause by expansively interpreting a 1974 state pharmacy regulation requiring counseling.

Some 12 other states have similar regulations, and they may be expected to follow Washington's lead. Even in the majority of states that now lack such a regulation, such a movement may provoke adoption of similar rules for pharmacists because multi-state HMOs and insurance companies will want uniformity for premium purposes.

Will the profession resist? Professor Brushwood thinks not — except for older practitioners, perhaps, most of whom were specifically educated in their student days *not* to counsel (so it's against their nature now).

When he first began talking to pharmacy groups about counseling over a decade ago, he discerned a generally hostile attitude to its legal dangers. Recently, though, he's observed a generally favorable attitude instead.

All this may be part of Marty Rubin's point. To survive, independents are going to have to make a bold point of, and promote, the value of their counseling capabilities.

Even those who have the least interest in counseling — the mail-order drug companies — are coming to grips with the issue. Medco Containment Services, operator of National Pharmacies, has been trying to sign up selected retail pharmacy representatives to handle some of its counseling needs, and claims a new 24-hour "800" number to give subscribers emergency pharmacist advice.

Does the public *want* to be counseled with every prescription? That may be the $64,000 question of the decade. Obviously, some do, and some don't. Present attitudes are probably changing, however.

Insurance companies, Medicaid and HMOs won't want to encourage counseling unless a cost-benefit association can be shown — and if it

continued on page 26

DICKINSON'S PHARMACY

Continued from page 25

is shown, and they do adopt the need for counseling, their reimbursement may be negative (X% off the present fee if you don't counsel, counseling to be assessed by periodic beneficiary audits/questionnaires).

But with the growing preponderance of elderly and others on maintenance medication, my bet is that counseling by pharmacists will be demand-driven in the near future. Those pharmacists who anticipatively move now will have an advantage.

I was wrong about *Leesley*, but not, I think, about pharmacy's renewal. Thanks, Tim.

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsibility for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

GUILFORD COUNTY

The Guilford County Society of Pharmacists met Sunday, April 10, 1988 at Moses Cone Hospital in the AHEC Center for a program "Alternative Health Care Delivery and Dispensing Sites." Jan Hirsch Phillips, Ph.D., Assistant Professsor of Pharmacy Administration, UNC School of Pharmacy was the speaker. The program led to a "lively discussion" of the topic.

During the short business session that followed, members were informed that a list of physicians who have registered with the Board of Pharmacy to dispense was available. Everyone was urged to inform the Board of any dispensing physicians who were not on this list of registrants.

Frank Burton
Secretary/Treasurer

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REPORT OF THE UNC AT CHAPEL HILL SCHOOL OF PHARMACY AND THE PHARMACY FOUNDATION OF NORTH CAROLINA, INC. PRESENTED TO THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION ANNUAL MEETING ASHEVILLE, N.C. MAY 19, 1988

It is a pleasure for me to present this report to this, the 108th convention of the North Carolina Pharmaceutical Association. This has been an extraordinary and, in many ways, a landmark year.

TEACHING AND RESEARCH

What a day it was when Chancellor Fordham announced the six teaching excellence awards conferred by the University. Dr. B. Wesley Hadzija, Associate Professor of Pharmaceutics, received one of the four Tanner Awards, and Dr. Steven D. Wyrick, Assistant Professor of Medicinal Chemistry, received the Nicholas Salgo Award. For our faculty to receive two out of six University awards in any given year is an accomplishment which will be most difficult to duplicate. The David S. Citron Award for a faculty member who best exemplifies dedicated service and commitment to family medicine, education, scholarship and health care delivery was awarded to Dr. Timothy J. Ives of our faculty. This award, presented by the Department of Family Medicine, School of Medicine, is significant since Dr. Ives' selection was made by his medical doctor colleagues. Although these are accomplishments of individual faculty members, we continue to place great emphasis on our professional pharmacy education. The appointment of an Associate Dean to oversee the integration and introduction of subject matter into the curriculum is an indication of our commitment.

An agreement with the School of Pharmacy, Shanghai Medical University for scholar exchange is significant, not so much in terms of the present but in terms of the future of our School and our country. As far as I am able to discern, the Harvard School of Public Health is the only other institution in this country with such an agreement with this institution.

An undergraduate student internship exchange program is just underway with the University of Wales Institute of Science and Technology. Eight of our students will shortly be going to the United Kingdom for the summer, while eight of their students will be studying in North Carolina. For these students who will be involved it will be a mind-expanding professional experience.

The ribbon-cutting ceremonies for the Laboratory for Molecular Modeling, held April 26, referred to in one news release as a "million dollar laboratory," was a showcase event. It brought to Beard Hall Governor Martin, President of the UNC System C. D. Spangler, Chancellor Fordham, Vice Chancellor Hershey, Associate Provost Harrison, American Chemical Society Board Chairman Eliel, Directors of the Pharmacy Foundation of North Carolina, and other dignitaries and an overflow crowd. The vision several years ago by Medicinal Chemistry and Natural Products Chairman, Dr. Claude Piantadosi, to develop capabilities in this cutting-edge molecular modeling activity came to fruition. Dr. Phillip Bowen, with us only two years, spearheaded the implementation of this Laboratory. The Laboratory features twelve computer work stations with state-of-the-art color graphics for three-dimensional molecular design displays. It is the only laboratory in the nation which offers *instruction* in drug molecular design. Almost all of the funding came from the private sector. We are grateful for the collaborative and cooperative environment of our University and the organizations and individuals in the Research Triangle Park that allowed the School of Pharmacy to be a magnet for this activity.

The National Institutes of Health will be funding this year the placement of an NMR instrument in our facility at a cost of about $200,000. This augments other acquisitions such as the less powerful NMR on permanent loan to the School from the National Institute of Environmental Health Sciences and the GC-Mass Spectrometer on loan from the Biological

continued on page 28

REPORT OF UNC

Continued from page 5

Sciences Research Center.

The School continues its rise to prominence. In addition to the Laboratory for Molecular Modeling already mentioned, we attract an impressive array of scholars world-wide. Anticancer, anti-AIDS and antiviral hepatitic research are major targets with thirteen patent disclosures made this year.

It is a tribute to the faculty that they have been able to display such energies in both instructional and research activities.

ENROLLMENT DEMOGRAPHY

Fall of 1987-88 enrolled 497 B.S. and 29 Pharm.D. students for a total of 526 professional degree students. Sixty-eight graduate students and 24 scholars, residents and fellows were also in place. The entering class (1987-88) numbered 172 highly qualified young men and women selected from a pool of over double that number. Among this group were 24 previous degree-holders and about 20 high school valedictorians. The class was 73% female with overal female presence of 68%. The next entering class (1988-89) is in the last stages of being selected. At this time the applicant pool quality is higher than ever, and, for the first time in some years, there appears to be a downward trend in female enrollment.

FACULTY

We suffer a great loss this year with Dr. Jean Gagnon accepting a call from the pharmaceutical industry. A vigorous search is in place for his replacement. As with any adversity, we look upon this as an opportunity. We are continuing to seek to fill additional vacancies in Pharmacy Administration and Pharmacy Practice.

Various faculty members are involved in a significant way in the Health Promotion/Disease Prevention Center, Geriatric Programs, Health Services Research Center, Toxicology Program, and other activities. They are too numerous and would be too lengthy to describe here. I can tell you, however, that the quality of our involvement has significantly enhanced Pharmacy's image and credibility, not only on this campus, but nationwide.

AHEC — CONTINUING EDUCATION AND SERVICE

No report would be complete without mentioning and giving plaudits to the AHEC system and those involved in it. Included are those of you who participate in our off-campus experiential instructional program. We are grateful. The student internship exchange program already mentioned is largely a Pharmacy AHEC-faculty initiative. The Master Practitioner-Instructor Development Program, with funding from AACP and supplemented by Vice Chancellor Hershey's office, is now in midstream. The instruments developed in this process will further improve our experiential instruction.

Over 500 hours of Continuing Education at 38 sites were offered. In addition, the CE Program, in conjunction with the Pharmacy Policy Research Laboratory (in the School), developed a Pharmacy Executive Management Seminar with the American Society of Hospital Pharmacists. A program on Pharmacoeconomics was developed with the American College of Clinical Pharmacy; three curricular CE programs in Pharmacokinetics; Advances in Drug Therapy and Issues in Aging were developed. Add to this the three audio-telenet conferences to thirteen states in the Southeast — a remarkable output!

A significant event was the first *W. J. Smith Practitioner-in-Residence Program.* North Carolina's own Banks Kerr was chosen by the students from a national pool for this honor. You will hear more about the *School's leadership development program* which brought national pharmacy leaders to Chapel Hill for a planning workshop. Time does not permit me to report the full range of our activities, but I cannot conclude this portion of my report without expressing appreciation for the work of our *Pharmacy Alumni Association.* The annual meeting was a great success!

BEARD ADDITION

Some of you already know of our plans for a STAR Wing to Beard Hall — STAR for *Support of Teaching and Research.* You will hear more about it as we begin to seek support for this structure.

PHARMACY FOUNDATION OF NORTH CAROLINA, INC.

The Foundation continues its important work for the School. President Ralph Rogers and the dedicated Directors will be requesting your continued support.

The Annual Meeting of the Directors was held on 23 September in the Kenan Center. The morning session was an expanded version of a "show and tell" session with a number of faculty participating. The luncheon meeting was high-

lighted by remarks from the Vice Chancellor for Health Affairs, H. Garland Hershey, and a "Chemistry in Pharmacy" recruitment video developed by Dr. John Mackowiak.

The Investment Report was presented by Burton Hudson and his colleagues, Steve Eubanks and Wayne Morgan. In brief, the Foundation's year-end (June 30, 1987) performance was excellent with a market *appreciation* of $235,528 for a total fund return of 18.0%. Total gift additions for the year were $184,528. The market value of the assets on June 30, 1987 was $2,423,147. The asset composition was as follows: Cash 14.2%, Equities 47.8%, Foreign 2.2%, and Fixed Income 35.8%.

The report of the solicitation drive was presented by the Secretary. For 1986-87 a total of 873 donors resulted in gifts of $184,528. Gifts from 262 donors amounted to $90,202, and one corporate donor gift was $50,000 for a total of $140,202 of the $184,528. The 262 individual donors represent gifts from $100 to $25,000. About 600 donors contributed the balance.

The Constitution and By-Laws revision was reported by Chairman W. J. Smith. An important part of the modification is the election and tenure of office of the Directors. Directors will be elected by mail ballot and take office at the next regularly scheduled meeting. This eliminates incoming and outgoing Directors' overlapping attendance at the Annual Meeting.

The Directors and officers of the Foundation are as follows:

Terms ending 1988:
Paul B. Bissette, Jr.
James L. Creech
Howard Q. Ferguson[1]
Herman W. Lynch
C. M. Whitehead
J. D. Whitehead III

Terms ending 1989:
T. R. Burgiss[2]
Laura G. Burnham
J. C. Hood
Ernest J. Rabil
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Pamela U. Joyner
W. Whitaker Moose[1]
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Terms ending 1991:
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H. V. Day[1]
Banks D. Kerr[2]
Ralph P. Rogers, Jr.[1, 2] (President)
W. J. Smith
F. F. Yarborough

Secretary:
Tom S. Miya[1, 2]

[1]Executive Committee
[2]Investment Committee

As the School enters a critical period of growth which also coincides with the Bicentennial Capital Campaign for the University of North Carolina, the Foundation will play an even larger role in its qualitative growth.

We are thankful to the Pharmacy Foundation of North Carolina as well as to all of you. The cumulative effect of your support is now having a dramatic effect. We will be calling upon you for continuing support.

Respectfully submitted,
Tom S. Miya
Dean, School of Pharmacy
Secretary, Pharmacy Foundation
of North Carolina, Inc.

WEDDINGS

ALLISON JONES and **THOMAS KIRK HOLDEN** were married March 26, 1988 in Buies Creek, N.C.

The bride is a 1987 graduate of the University of North Carolina at Chapel Hill School of Pharmacy and is employed at Kerr Drugs in Charlotte. The bridegroom is a 1980 graduate of Purdue School of Pharmacy in Indiana and is pharmacist-manager of Revco in Concord. The couple lives in Charlotte, N.C.

SUZANNE MARIE MARSH of Cary and Brian David Ward of Wake Forest were married May 21 at North Raleigh United Methodist Church.

The bride is a graduate of the School of Pharmacy, University of North Carolina at Chapel Hill and is a pharmacist at Kerr Drugs. The bridegroom is a senior process engineer at AVX Corp. and is a graduate of N.C. State University. The couple will live in Wake Forest.

The wedding of **KAREN GAIL STEPHENSON** and **STANLEY OAKLEY WATTS** was at 3 p.m. May 15 in Fuquay-Varina United Methodist Church.

The couple are graduates of the University of North Carolina at Chapel Hill School of Pharmacy. The bride is a pharmacist for K-Mart and the bridegroom is a pharmacist for SuperX Drugs. The couple will live in Kernersville.

CORRESPONDENCE COURSE
NEW DRUG UPDATE 1987-1988: PART I

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University, Ada, OH
and
J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to identify new drugs approved by FDA and/or marketed in 1987 and 1988.

Objectives

At the conclusion of this lesson, the participant will be able to:

1. exhibit knowledge of the drugs by pharmacologic and therapeutic classification;
2. choose the indications, mechanism of action, pharmacokinetic properties, and benefits and limitations;
3. identify adverse effects and drug interactions associated with the drugs; and
4. demonstrate an ability to counsel patients on these new drugs.

Recently approved and/or marketed new chemical drug entities (Table 1) comprise, for the most part, two main categories: cardiovascular agents and anti-infectives. The other new drugs represent a variety of pharmacologic categories. Of special interest is the number of agents that are derived from recombinant DNA technology. Four such drugs were approved during the past year.

This article provides an overview of the cardiovascular and anti-inflammatory new drugs that were approved and/or marketed during 1987 and 1988. The remaining drugs will be discussed in Part II of this two-part series.

Activase (alteplase, recombinant)

Also known as TPA and t-PA, alteplase, recombinant is the generic name for tissue plasminogen activator. The "recombinant" term is used as a modifier because the drug is produced by bacterial colonies via recombinant DNA technology rather than chemical synthesis. Activase is a thrombolytic agent for use in persons with a recent acute myocardial infarction (MI).

Tissue plasminogen activator is an endogenous protein that occurs naturally in humans, and is found throughout the vasculature system. Following formation of a fibrin clot within the vasculature, TPA activates plasminogen by converting it to its active form, plasmin. Plasmin is an enzyme that lyses fibrin to help maintain the fluidity of blood.

Activase is administered intravenously, as quickly after a myocardial infarction as possible. It has produced coronary recanalization in 60 percent or more patients within 90 minutes. These responses are comparable to or greater than results with streptokinase and urokinase, the previously available thrombolytic agents.

Primary concerns of therapy of acute MI are reinfarction, arrhythmias, and bleeding. The latter is reportedly less common and less severe with TPA than with other thrombolytic agents, since it is more specific for fibrin. It must bind to fibrin to exert its action; thus, it increases the plasmin level mainly at the site of the clot, rather than throughout the systemic circulation. In clinical trials, investigators have reported that after reperfusion, arrhythmias and reinfarction have been less severe than with other thrombolytic agents.

More study will be required before the true value of this drug can be determined. Some studies show that overall TPA is not superior to other thrombolytic agents. The original double-blind studies were discontinued because the drug produced such significantly better results than placebo, that researchers felt it was unethical to withhold the drug from the patients in the placebo group.

Activase has already made an impact in the marketplace. During the first month of introduction, sales averaged $1.5 million per day.

Brevibloc (esmolol)

A parenterally administered, cardioselective beta-adrenergic blocker, Brevibloc has an elimination half-life of approximately 9 minutes. It is

TABLE 1
New Drugs Approved and/or Marketed in 1987 and 1988

Trade Name	Generic Name	Manufacturer	Use
Aclovate	Alclometasone	Glaxo	Topical steroid
Activase	Alteplase, recombinant	Genentech	Antithrombotic
Alfenta	Alfentanil	Janssen	Anesthesic adjunct
Atrovent	Ipratropium	Boehringer Ingelheim	Bronchodilator
Azactam	Aztreonam	Squibb	Antibiotic
Bactroban	Mupirocin	Beecham	Antibiotic
Brevibloc	Esmolol	DuPont	Beta-adrenergic blocker
Cefmax	Cefmenoxime	Abbott	Antibiotic
Cipro	Ciprofloxacin	Miles	Anti-infective
Corotrope	Milrinone	Sterling	Inotropic
Cyklokapron	Tranexamic acid	KabiVitrium	Hemostatic
Deursil	Ursodiol	Gipharmex S.p.A.	Gallstone dissolver
Elocon	Mometasone	Schering	Topical steroid
Enkaid	Encainide	Bristol	Antiarrhythmic
Humatrope	Somatropin	Lilly	Growth hormone
Hytrin	Terazosin	Abbott, Burroughs Wellcome	Antihypertensive
Iopidine	Aplonidine	Alcon	Ophthalmic
Lamprene	Clofazimine	Geigy	Anti-infective
Levatol	Penbutolol	Lilly	Beta-adrenergic blocker
Metrodin	Urofollitropin	Serono	Gonadotropin
Mevacor	Lovastatin	Merck, Sharp & Dohme	Anticholesterolemic
Monoclate Factor VIII:C	Antihemophilic factor VIII:C	Armour	Clotting factor
Noroxin	Norfloxacin	Merck, Sharp & Dohme	Anti-infective
Novantrone	Mitoxantrone	Lederle	Antineoplastic
Ocufen	Flurbiprofen	Allergan	NSAID
Prinivil	Lisinopril	Merck, Sharp & Dohme	Antihypertensive
ProHIBIT	Haemophilus b conjugate vaccine	Connaught	Immunological
Prolastin	$Alpha_1$-Proteinase inhibitor	Miles	Emphysema
Prozac	Fluoxetine	Lilly	Antidepressant
Retrovir	Zidovudine	Burroughs Wellcome	Antiviral
Rimadyl	Carprofen	Roche	NSAID
Rowasa	Mesalamine	Reid-Rowell	Anti-inflammatory
Tenex	Guanfacine	Robins	Antihypertensive
Terazol-7	Terconazole	Ortho	Antifungal
Ucephan	Sodium benzoate/ Sodium phenylacetate	Kendall McGaw	Prevent/treat hyperammonemia
Unasyn	Ampicillin/Sulbactam	Roerig	Antibiotic
Zestril	Lisinopril	I.C.I.	Antihypertensive

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CORRESPONDENCE COURSE

Continued from page 31

indicated for emergency treatment of supraventricular tachycardia or other pathologic conditions that warrant short-term control of irregular rapid ventricular rate. Beta-adrenergic blockers are valuable because they reduce sympathetic stimulation to heart muscle and reduce oxygen demand, actions which help prevent myocardial tissue necrosis. Brevibloc is administered to stabilize the patient until more specific or appropriate therapy can be instituted.

Corotrope (milrinone)

Corotrope is an inotropic agent that is chemically related to previously available amrinone (Inocor) and approximately 20 times more potent. It is also safer in that drug-induced arrhythmias and thrombocytopenia caused by amrinone have not been seen with milrinone.

Traditionally, digitalis, and more recently amrinone, have been used for short-term emergency intravenous treatment of refractive CHF. Both digitalis and amrinone are potentially toxic. It is anticipated that milrinone will cut into the amrinone market.

The new drug, as with its predecessor, is believed to work by inhibiting phosphodiesterase. This in turn increases intracellular c-AMP which then enhances calcium utilization. It may also exert other direct effects on transmembrane calcium movement. The net result is an increase in the strength and force of heart muscle contractions, making these drugs inotropic. Its manufacturer hopes to eventually market an oral dosage form which could possibly cut into the digoxin market for treating chronic congestive heart failure.

Cyklokapron (tranexamic acid)

This new drug is indicated for short-term use of 2 to 8 days in hemophilia patients during and following tooth extraction. A competitive inhibitor of plasminogen and non-competitive inhibitor

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of plasmin, the drug permits fibrin clots to form. By inhibiting formation and action of plasmin, Cyklokapron prevents excessive breakdown of fibrin, thereby enhancing clot formation, and preventing hemorrhage.

Enkaid (encainide)

Since Enkaid blocks the movement of sodium across cell membranes in Purkinje fibers and the myocardium, it is classed pharmacologically as a "1C" antiarrhythmic, joining flecainide (Tambocor). It slows depolarization but has little effect on the duration of the action potential or upon repolarization. Drug action appears to be greater on cells in ischemic, rather than normal, areas.

Enkaid is indicated for treatment of life-threatening ventricular arrhythmias. Clinical trials showed that it abolishes nonsustained ventricular tachycardia in 70 percent of patients, and suppresses premature ventricular contraction by 90 percent in over 60 percent of patients studied.

As with other antiarrhythmics, Enkaid can also cause arrhythmias so its use must be weighed against the risks associated with therapy. Ten percent of patients have experienced aggravated ventricular arrhythmias. Dizziness, blurred or abnormal vision, and headache are the most commonly reported adverse effects. No serious drug interactions have yet been reported, but potentiation of other antiarrhythmics can be anticipated.

Hytrin (terazosin)

Hytrin is classed pharmacologically as an alpha$_1$-adrenergic blocker, joining prazosin (Minipress) in that classification. However, it is the first of its class to be effective with once-daily dosing.

Like prazosin and other alpha$_1$-adrenergic blockers, terazosin may cause marked hypotension with the first dose, resulting in lightheadedness and fainting (syncope), usually occurring within 90 minutes of dosing. A similar effect occurs if chronic therapy is interrupted for more than a few doses and then reinstituted.

To decrease the chance of syncope or postural hypotension when initiating therapy, the first dose (1 mg) should be taken at bedtime. Dosage can be adjusted upward from 1 mg if needed.

Other adverse effects that are most often reported include palpitations, dizziness, weakness and nausea.

There are two unusual phenomena in the marketing of Hytrin. First, all dosage strengths are priced the same. It is felt that this one-price policy will enhance compliance by patients who are started on the lower-strength tablets and then switched to higher strength tablets. The second is that terazosin will be co-marketed by two manufacturers under the same tradename.

Levatol (penbutolol)

This nonselective beta-adrenergic blocker has a long half-life which permits once-daily dosing. Approved in December 1987, its sponsor has noted that it may not proceed with marketing.

Mevacor (lovastatin)

Mevacor, a serum cholesterol lowering agent, works by inhibiting the enzyme HMG-CoA reductase. This is the rate-limiting step that regulates cholesterol synthesis.

Mevacor is indicated as an adjunct to diet in lowering elevated levels of low density lipoprotein (LDL) cholesterol and total cholesterol in patients with Types IIa and IIb (Primary) hypercholesterolemia. It also elevates levels of high density lipoprotein (HDL) cholesterol. It is recommended that patients first be assessed for response to dietary control alone, and then dosed with Mevacor if non-drug measures do not control the disease. The drug should bring about marked clinical response within 2 weeks of initiating therapy, with maximum therapeutic response in 4 to 6 weeks.

High LDL cholesterol, and reduced HDL cholesterol levels are important risk factors for coronary heart disease. Briefly, LDL transports cholesterol to tissues such as arterial walls where it may accumulate to form plaque. HDL transports cholesterol back to the liver where it is transformed into bile acids, or secreted into the gallbladder for excretion.

Mevacor is generally well tolerated and causes few adverse effects. Most common subjective responses are gastrointestinal (5 percent), skin rash/pruritis (5 percent), and headache (9 percent). Less than 1 percent of patients in clinical trials were removed due to adverse effects.

The dose range is 20 to 80 mg/day. Recommended titration is 20 mg daily for several weeks, advancing in increments of 20 mg daily up to 80 mg. It is felt that if patients do not respond to 80 mg daily, the drug will not be effective for them. Optimally, Mevacor tablets should be taken with the evening meal since cholesterol synthesis is most active between midnight and 3:00 a.m. Patients should be strongly advised to

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CORRESPONDENCE COURSE

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comply with both their dosage regimen and the dietary restrictions provided by their physicians because the drug is an adjunct to treatment, not a cure.

Monoclate (antihemophilic factor VIII)

A product of recombinant DNA technology, Monoclate restores the blood clotting factor VIII. Such deficiency is characteristic of patients with hemophilia A. The drug was developed because the only source of this factor for hemophilics was human blood donors. The fear and reality of the presence of HIV and hepatitis virus in those earlier, less purified products made the development of Monoclate a worthwhile endeavor.

Prinivil/Zestril (lisinopril)

Lisinopril is the first of several "second generation" angiotensin converting enzyme (ACE) n the U.S. While pharmacologically similar to both inhibitors to be approved for marketing ienalapril (Vasotec) and captopril (Capoten), its primary advantage is its longer half-life, hence, once-daily dosing.

ACE inhibitors act upon the enzyme which converts angiotensin I to angiotensin II. Angiotensin II normally causes physiological responses such as direct and indirect vasoconstriction, and retention of aldosterone, which in turn raise the blood pressure. Reducing its formation by suppressing ACE leads to a lowering of the pressure. Studies have shown that 5 to 10 mg/day of lisinopril is effective in most patients with mild to moderate essential hypertension.

ACE inhibitors affect aldosterone action, which in turn can increase potassium retention. The potentially most significant drug interaction involving lisinopril may be the possibility of hyperkalemia if potassium supplements or potassium-retaining diuretics are taken concurrently.

Lisinopril has not yet been associated with hematologic, cardiovascular, or CNS toxicity as has its structural analogue, enalapril. The bioavailability of lisinopril is unaffected by coadministration of food.

It has not yet been compared pharmacologically or therapeutically to the other ACE inhibitors in controlled clinical trials. The ultimate place in therapy for lisinopril remains to be determined, but the current trend toward once a day dosing points to significant usage.

Tenex (guanfacine)

Tenex is a centrally acting alpha$_2$-adrenergic stimulant, joining clondine (Catapres) and guanabenz (Wytensin) in this classification. Such pharmacologic action reduces sympathetic stimulation from the vasomotor center in the brain to the heart and blood vessels, resulting in decreased arterial vasoconstriction and lower peripheral resistance. Blood pressure and heart rate are reduced, but cardiac output is not significantly altered. Tenex is indicated for management of mild to moderate essential hypertension.

Adverse effects are qualitatively the same as for other central alpha$_2$-adrenergic stimulants. The most common reactions include dry mouth (40 percent), constipation (16 percent), fatigue (12 percent), somnolence (10 percent), and dizziness (6 percent). These reactions are mild and tend to disappear on continued use. The claimed advantage of Tenex over earlier available products include a lower incidence of CNS side effects, and once-daily dosing. There is also less rebound hypertension if therapy is abruptly discontinued.

Nonetheless, Tenex can cause rebound hypertension on abrupt withdrawal of medication once the patient is stabilized. If this occurs, it will appear within 2 to 3 days (versus 12 to 24 hours with clonidine) due to the agent's longer biological half-life.

The drug is taken once a day, preferably at bedtime. It is recommended that patients be stabilized on a diuretic before the drug is initiated to reduce their overall fluid volume.

ANTI-INFLAMMATORY AGENTS

Aclovate (alclometasone) Elocin (mometasone)

As with previously available topical corticosteroids, these two products are indicated for itching and inflammation associated with corticosteroid-responsive skin disorders. It is of some interest that despite the introduction of dozens of topical steroids, and their long and wide-spread use, their exact mechanism of action has not been determined. These agents appear to act similarly to the others by inhibiting the body's immune system and reducing its inflammation component.

Both drugs have a low potential for adverse

reactions when used as directed. Aclovate cream or ointment should be applied two or three times a day; Elocin cream is applied once daily. Both products should be applied in a thin layer, and not covered with an occlusive dressing unless the physician specifically orders it.

Ocufen (flurbiprofen)

This NSAID possesses analgesic, antipyretic and anti-inflammatory activity. Like other NSAIDS, it is believed to inhibit prostaglandin synthesis.

Ocufen is marketed as an ophthalmic solution indicated for prevention of miosis during surgery. It is instilled into the eye prior to surgery. Prostaglandins have been shown to mediate intraocular inflammation and induce miosis. Hence, prostaglandin inhibition reduces inflammation and prevents excessive miosis.

Look for fluriprofen to also enter the marketplace in an oral dosage form. Its pharmacology is similar to that of other oral NSAIDS.

Rimadyl (carprofen)

Possibly the most important point about this drug is that it is the first new systemic NSAID, of a backlog of a half dozen or so, to be approved in over two years. Rimadyl has a similar therapeutic profile to other NSAIDS already available. The main advantage claimed is that it has lower gastrointestinal (GI) toxicity. Animal studies show it is at least 16 times less ulcergenic than indomethacin, which was the reason it was developed — to replace indomethacin. There are no studies that compare it with other members of this chemical class.

Rimadyl can be taken twice a day by most patients. The usual dose for analgesia is 150 mg twice daily, but doses as high as 600 mg twice daily have been employed when utilized for inflammatory conditions.

Like other NSAIDS, it inhibits prostaglandin synthesis. However, its inhibition appears to be relatively selective, with minimal activity on prostaglandin E_2 (a cytoprotective prostaglandin). It is speculated that this selective action is responsible for its lower GI toxicity.

Rowasa (mesalamine)

As background, sulfasalazine has been the drug of choice for ulcerative colitis and distal inflammatory bowel disease for about 4 decades. Sulfasalazine is a combination of 2 chemical moieties, sulfapyridine and 5-aminosalicylic acid (5ASA), linked by an azo bond. Following ingestion, about one-third of a dose is absorbed. The remainder passes on to the colon. Colonic enzymes split the unabsorbed drug into its component molecules, sulfapyridine and its active group, 5ASA. Absorbed drug is also split, then further metabolizedized and excreted. Toxicity (nausea, vomiting, headache, malaise, hemolysis, hypersensitivity) is a problem with sulfasalazine and is directly proportional to blood levels of sulfapyridine.

Rowasa is a stable form of 5ASA. Since it does not contain a sulfonamide group (i.e., sulfapyridine), it causes fewer side effects. On the other hand, the therapeutic activity of sulfasalazine results from the 5ASA component, so mesalamine provides the benefits with less risk.

The mechanism of anti-inflammatory action of 5ASA is postulated to result from prostaglandin inhibition (salicylates are members of the NSAID group). An alternate hypothesis is that 5ASA inhibits leukotriene production by neutrophils.

Studies have shown that 5ASA enemas are more effective than hydrocortisone enemas in treatment of ulcerative colitis. Initially available as a disposable enema, an oral tablet and rectal suppository dosage form may be available in the future.

In the next lesson of the series, the nearly two dozen other drugs that were approved and/or marketed in 1987 and 1988 will be reviewed.

CE Test on page 36

This continuing education for Pharmacy article is provided through a grant from

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CORRESPONDENCE COURSE QUIZ

1. The recently released alpha$_1$-adrenergic blocker that is being distributed by two different pharmaceutical manufacturers, and has the same cost for all three dosage strengths is:
   a. Cyklokapron.
   b. Hytrin.
   c. Levatol.
   d. Tenex.
2. Activase exerts its action by activating:
   a. angiotensinogen.
   b. fibrinogen.
   c. pepsinogen.
   d. plasminogen.
3. All of the following advice is appropriate for patients receiving a prescription for Mevacor EXCEPT one.
   a. You must follow the diet your doctor prescribed for the drug to work properly.
   b. Take the tablet(s) in the evening when you are eating supper.
   c. This drug causes drowsiness. Therefore, do not drive or operate hazardous equipment.
   d. Take the tablet(s) every day because it takes a few weeks for the drug to bring your cholesterol levels down.
4. All of the following statements about Brevibloc are true EXCEPT:
   a. it has a half-life of approximately 9 minutes.
   b. it reduces sympathetic stimulation of the heart muscle.
   c. it lessens myocardial tissue oxygen demand.
   d. it must be taken on an empty stomach.
5. Enkaid exerts all of the following effects EXCEPT:
   a. blocking the movement of sodium across cell membranes in Purkinje fibers.
   b. slowing depolarization of myocardial tissue.
   c. inhibiting phosphodiesterase, thereby increasing intra-cellular cAMP.
   d. suppressing premature ventricular contractions.
6. Prinivil and Zestril are LEAST likely to induce hyperkalemia when they are used concurrently with:
   a. potassium supplements.
   b. salt substitutes.
   c. potassium-sparing diuretics.
   d. thiazide diuretics.
7. The enzyme that lyses fibrin to help maintain the fluidity of blood is:
   a. bradykinin.
   b. plasmin.
   c. renin.
   d. warfarin.
8. All of the following recently released drugs have a longer biological half-life than the predecessors in their respective pharmacologic group, thus allowing once a day dosing, EXCEPT:
   a. Brevibloc.
   b. Hytrin.
   c. Prinivil.
   d. Tenex.
9. In each of the following choices, the drug and its respective route of administration is correct EXCEPT:
   a. Aclovate — topical.
   b. Ocufen — ophthalmic.
   c. Rimadyl — aerosol.
   d. Rowasa — rectal.
10. When compared to its predecessor amrinone, Corotrope:
    a. is more potent.
    b. causes more thrombocytopenia.
    c. is chemically unrelated to amrinone.
    d. causes more arrhythmias.

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PRESIDENT'S REPORT

Continued from page 4

raised, the ladies restroom in the Pharmacy Institute has been remodeled. Their work spurred us to follow their lead and remodel the men's restroom. The results are a great improvement of both! Thanks to the ladies for their continued support of Pharmacy in North Carolina.

Kathryn Jefferson has been added to the NCPhA staff on a part-time basis. Kathryn is from Kentucky, and a graduate of the University of Kentucky School of Pharmacy. She will serve the association in publications and professional affairs. With increased demands for service in these areas — Journal, Newsletter, available jobs and services offered — Kathryn should have no problem staying busy. One of her first duties will include a convention report, so try to meet her at the convention.

I am also happy to report that this past year we added 251 members. This amounted to a net increase in membership of 151 members, taking into consideration those who dropped their membership, or death of members. The NCPhA has over 2400 members now. We hope this number will continue to grow.

This past year has been busy, but enjoyable for me. I attended the Southeastern Executive meeting in Point Clear, Alabama, the NARD Convention in Las Vegas, made a number of trips to the legislature, represented the NCPhA at Campbell University, UNC, and made a number of trips to towns across the state. The most impressive thing on my out-of-state meetings was that I realize how well-off pharmacy in North Carolina is in every respect, compared to other states. This did not come by accident or good luck, but by the years of interest and work by the pharmacists of this state! It is a perfect example of "Good things come to those who work for it".

I would like to take this opportunity to thank all who have helped make this past year enjoyable, and, I hope, successful: Al Mebane and all of the staff of the NCPhA, the Executive Committee, and all other Chairpersons and committee members, as well as those who helped when called on. It has been a great pleasure for me to serve as your President this past year!

Respectfully submitted,
Julian Upchurch

Cut Out or Reproduce and Mail

CONTINUING PHARMACEUTICAL EDUCATION

New Drug Update 1987-1988: Part I

- Attach mailing label from The Carolina Journal of Pharmacy or print your name and address and mail to CE Test, NCPhA, P.O. Box 151, Chapel Hill NC 27514
- Completed answer sheets may be returned on a monthly or less frequent basis for grading.
- **This is a member service.** Non-members responses will not be graded nor CPE credit provided.
- NCPhA will maintain a copy of your completed CPE tests and upon successful completion of each program, will issue a certificate for one (1) hour of board-approved CPE.
- If more than two questions are answered incorrectly, the test is failed. You will be given one opportunity to submit a second answer sheet.

Please circle correct answers

1. a b c d	4. a b c d	7. a b c d
2. a b c d	5. a b c d	8. a b c d
3. a b c d	6. a b c d	9. a b c d
		10. a b c d

Evaluation: Excellent Good Fair Poor

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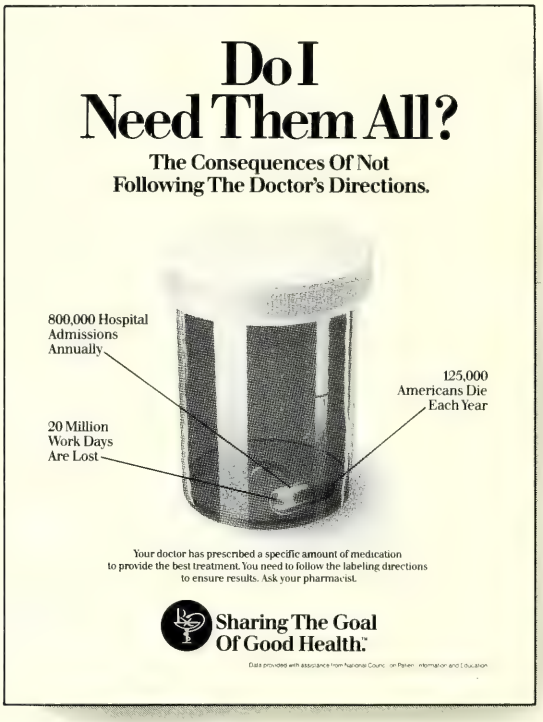
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SERVICES TO ELDERLY

Personalized pharmacy service is the most important single factor in determining why elderly consumers prefer the independent retail pharmacy over all other pharmacy outlets and the improtance of that service increases as consumers grow older, according to a new nationwide research study released today at Rx Expo '88, the midyear educational meeting of NARD, the national association representing independent retail pharmacy. Elderly shoppers are also much less likely to move than younger customers, and store loyalty is twice as great for them, the comprehensive research study also finds.

The report, entitled *Aging Americans: Annual Audit of Attitudes,* reveals attitudes and expectations of older Americans uncovered during an extensive research project conducted early this year. NARD, Johnson & Johnson, and the National Council of the Aging collaborated on the project, which is based on survey results from 10,070 elderly citizens in households nationwide and 1,000 older persons affiliated with 40 different senior centers. In addition, investigators conducted in-depth interviews with ten independent retail pharmacists who have demonstrated outstanding service in meeting the needs of older Americans. Highlights of the report were released today in an Rx expo general session sponsored by the Johnson & Johnson Health Care Company.

The study revealed that personalized service is the single most important factor that makes older consumers prefer the independent retail pharmacy. Moreover, special, personalized service becomes increasingly important with advancing age. Other services desired by older customers, in order of importance, were home delivery service, third-party billing, private pay charge accounts, and emergency hours service, the report revealed.

Ninety percent of all customers, including older clients, prefer to fill their prescriptions at

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CONVENTION HIGHLIGHTS

Guest speaker, Representative Bobby Etheridge (center) at the Pharm-PAC Breakfast flanked by Chairman, Jimmie Jackson (center-right), Secretary, Jack Watts (right) and Benny Ridout of Pharm-PAC.

Conventioneers mingle with exhibitors at the Exhibitors Fair.

SERVICES TO THE ELDERLY

Continued from page 39

drugstores rather than through nontraditional drug delivery systems. Older customers most strongly prefer to shop at independent pharmacies over chain pharmacies, grocery store pharmacies, and other settings. The number and quality of special services at independent drugstores, as perceived by customers, rank well ahead of all other pharmacy options.

The study also highlights the fact that physical impairments strongly influence the retail service needs of older persons. More than 50 percent of consumers 75 years and older must cope with hearing loss; 30 percent for the 65 to 74 age group. Arthritis affects 52 percent of older shoppers, cataracts 23 percent, and orthopedic impairments 19 percent.

The report includes a profile of aging Americans based on data from a variety of sources. It points out that the population of elderly Americans 85 years of age or older is expected to increase 75 percent in the next 12 years alone. More than one-fourth of people over age 75 need home care support services. elderly citizens live mostly in family settings, two-thirds with spouses and/or other family members, making caregiver roles especially important.

Health care costs take 16 percent of elderly income, a bigger bite than before Medicare and Medicaid were launched. Half of long-term costs are paid from federal and state government and half from private resources of older persons. Less than one percent are covered by private insurance.

The report's seven chapters are:

1. **Aging Americans: A Profile,** which includes information on demographics, life expectancy, geographical distribution, health care expenditures, and physical impairments.

2. **Changing Preferences for Retailing Services,** which covers store attributes, customer loyalty, why customers leave a pharmacy, the quest by consumers for more service, and the elderly's views of a full-service pharmacy.

3. **Drugstore Shopping Behavior,** covering the role of caregivers, the types of stores elderly consumers prefer, product line preferences, and the expectations elderly consumers have of their pharmacy shopping experience.

4. **Influences on Buying Decisions,** which includes data on health care needs, buying patterns of caregivers, living arrangements, product selections, and information on how senior consumers grade pharmacies.

5. **Media Exposure,** with detailed information on advertising trends and exposure to different advertising media.

6. **Suggestions from Seniors** on making shopping easier and more interesting, on making senior customers feel important, and other valuable insights.

7. **How the Leading Pharmacists Respond,** including strategies on adapting to the needs of the aging population, enhancing community relations, and conducting effective advertising programs.

The report is available from NARD, 205 Daingerfield Road, Alexandria, VA 22314 for $10 to NARD members (nonmembers, $20).

BRECHT'S TIDBITS

Last Christmas, 1987, the following story had such pleasing and interesting twists that we traded it around a lot. Recently I could not recall the first third nor could any of four or more friends when asked at Commencement, May 8. Then I remembered telling it to Helen Fink at Bowling league. We like to exchange jokes. When I told it to her she took notes so that she could tell her grandchildren. And so she told me the missing part after looking it up.

This applies to an oral examination to be passed by a questionable candidate for admission to an athletic team, pharmacy school, or whatever.

1) How many days in the week begin with the letter "T"? Ans. I'll have to think about that; can I come back tomorrow? All right. 2) How many seconds are there in a year? Ans. That's harder; can I put it off until tomorrow? 3) How many "D's" are there in the song "Rudolf, the Red Nosed Reindeer?" Ans. I'll tell you tomorrow.

Answers the next day:

1) There are two.

That's right. How did you get that? Ans. Today and tomorrow.

That isn't what we thought, but we'll accept it. How many seconds in a year?

Twelve.

How did you get that?

Well, there's January second, February secon, and ten more.

We'll have to accept your answer. How many "D's"?

One hundred and sixty five. It goes dee dee dee dee dee deedeedee. . . .

O.K. You pass.

Submitted by E.A. Brecht

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PHARMACIST WANTED: Hospital position available at Iredell Memorial Hospital located in Statesville, NC. Progressive department with computerized unit dose and IV admixture services. Pharmacists participate in therapeutic drug monitoring. Competitive salary. Contact: Beverly Wilkinson, Director of Personnel, or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

DIRECTOR OF PHARMACY: Pungo District in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Pharmacy. Salary negotiable and commensurate with experience. Interested parties should contact the adminstration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

PHARMACIST WANTED: Director of Pharmacy for 64-bed hospital in Southeastern North Carolina. Excellent hours, salary negotiable, and good fringe benefits. Contact Tom Smart at (919) 582-1776.

PHARMACISTS NEEDED: Due to expansion, pharmacists are needed 1st and 2nd shifts. Pharmacy is decentralized with unit dose and IV-Ad mixtures. Other services include: nutrition support and drug information. Salarys are negotiable depending on experience. For more information send resume or call collect: Letha Huffman, NC Baptist Hospital, 300 S. Hawthorne Road, Winston Salem, NC 27103. (919) 748-4717. EOE.

RETAIL POSITIONS OPEN

PHARMACIST: Greensboro area — Ambitious pharmacist-manager for high-volume multi-service Clinic Pharmacy. Good Hours, Good Base Salary, Good Bonus. Call and/or send resume to: Lewis Rieger, Encore Pharmacy, Inc. P.O. Box 23791, Harahan, Louisiana 70183. 514-733-6031.

PHARMACIST WANTED: We are seeking an ambitious, and professional career-minded individual for a pharmacist position in Greensboro, High Point and Winston-Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure pharmacy setting". If interested call Lew Thompson 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke VA 24038. EOE.

PHARMACISTS WANTED: Pharmacist positions available with ownership privileges. Excellent salary and benefits. Contact Tim Walker at Walker's Pharmacy at (919) 635-9741.

PHARMACISTS WANTED: Drug Emporium, Greensboro, NC now hiring pharmacists. Excellent starting salary. Complete benefit package, plus bonuses included. Call Kent Huffman for details at (919) 282-3993.

PHARMACISTS WANTED: Farmco Drug Centers have present positions available in Rocky Mount, Elizabeth City and Goldsboro North Carolina. For more information call collect Buddy Liebowitz

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at (804) 858-6063.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

PHARMACISTS WANTED: Full-time pharmacists needed for Eckerd stores in Albemarle, High Point, Salisbury and Spencer, North Carolina. Interested parties may call (919) 841-7308 to set up interview date and time.

PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call 919-481-1272 evenings.

NEED A PHARMACIST: Pharmacist is looking for full-time or relief work in Charlotte area. Call after 7:30 p.m. (704) 553-1924.

NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

NEED A PHARMACIST?: Pharmacist is interested in becoming a permanent floater for corporation or hospital. Has 20+ years of experience. Licensed in NC and SC and will have VA license in June. Will do relief work for retail/hospital position. If you are in need of such a person please contact Box CBD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIES FOR SALE

PHARMACY FOR SALE: Pharmacy in small Western North Carolina town. Gross sales in 1987 — $290,000.00. For more information call Steve at (704) 628-3469.

PHARMACY FOR SALE: Pharmacy for sale in Piedmont. Gross sales over $300,000 a year. Contact Box TVD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Store location approximately 25 miles from Charlotte. Sales over $1,000,000 annually. Reply to Box VTC, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Owner wants to retire. Store 12 miles from Charlotte. Sales $225,000 annually. Inventory $45,000. Reply to Box ZYX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

DRUG STORE FOR SALE: Established drug store for young pharmacist. Easy operating as one man store. Very reasonably priced. Write Box TTT, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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CLASSIFIED

Continued from page 43

PHARMACY FOR SALE: North Carolina or NC triad area. 1½ miles from hospital and MD's. 5½ days, no holidays. Sales - $200,000+. Growth potential. Square footage - 1,800 square feet. Call (919) 869-5851 after 7 p.m.

PROFESSIONAL PHARMACIES: Several small prescription-oriented pharmacies are currently available for individual ownership in North Carolina. These opportunities provide the vehicle to practice pharmacy the way you were taught, while offering an attractive income and more time to be with your family. In some of these cases, financing is also available to qualified candidates. For more information write: Jan Patrick, 1100 N. Lindbergh Blvd., St. Louis, MO 63132.

WANT TO BUY: This Iowa pharmacist licensed in NC would like to purchase a pharmacy in Eastern NC. Strictly confidential. If you are interested in selling your pharmacy, please contact Box RTU, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

WANT TO BUY: Medical Building or Clinic Pharmacies. Call or write: Lewis Rieger, Encore Pharmacy, Inc., P.O. Box 23791, Harahan, Louisiana 70183. 504-733-6031.

PHARMACY FOR SALE: Medical Clinical Pharmacy located in suburban Winston-Salem area. Tremendous growth potential around six (6) doctors. Gross sales in 1987 were $177,000. Only 1½ years old. Good hours, 9-6 Monday - Friday. Will sell for a reasonable offer. Reply to Box PZZ, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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RX SHELVING FOR SALE: Used metal RX shelving - approx. 50 ft. - $650.00. Call or write: Roland Thomas, 3555 Tryclan Drive, Charlotte, NC 28217. 704-525-5300.

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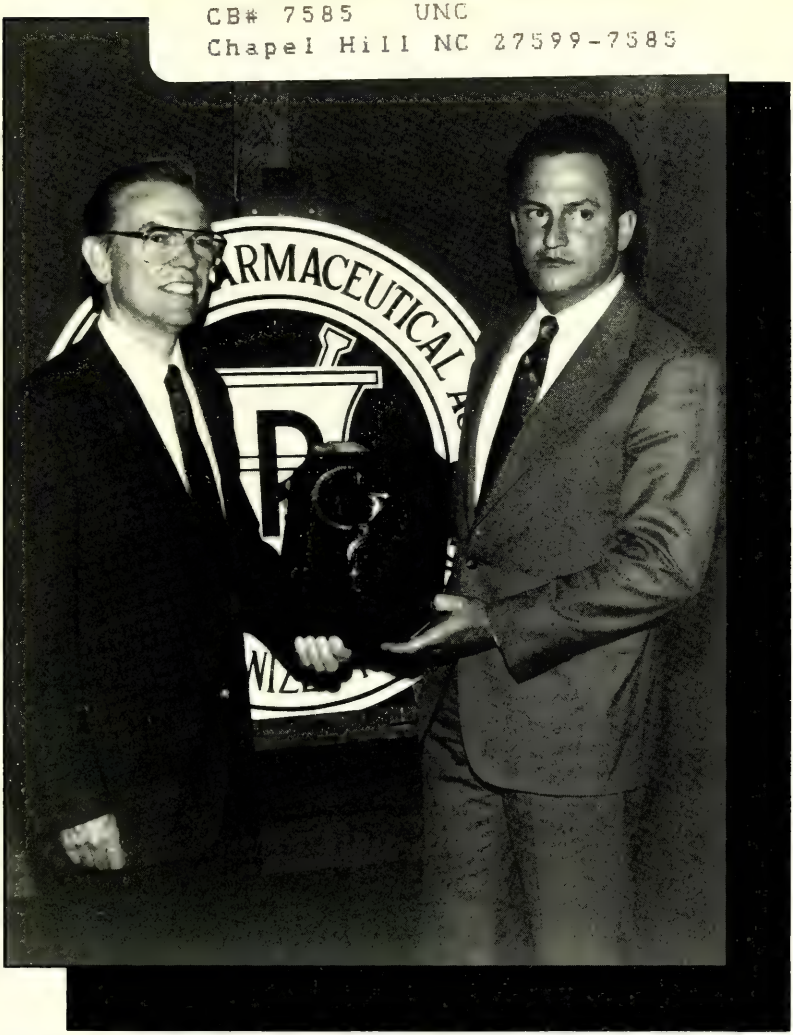

Ralph H. Ashworth (left) receiving the A.H. Robins "Bowl of Hygeia" Award from Harold L. Cox, Jr. (right), Division of the A. H. Robins Company, at the Opening Session Banquet during the 108th Annual NCPhA Convention, Asheville, NC, May 18-21, 1988. (Photo by Colorcraft.)

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ASHWORTH RECEIVES BOWL OF HYGEIA AWARD

Ralph Ashworth with his wife Daphne A. Ashworth (Photo by Colorcraft).

Ralph H. Ashworth of Cary has been honored by the North Carolina Pharmaceutical Association as its 1988 recipient of the A. H. Robins "Bowl of Hygeia" Award for outstanding community service by pharmacists.

Ashworth, owner of Ashworth Drugs at 105 West Chatham Street, received the award during the association's annual meeting in Asheville.

Making the presentation was Harold L. Cox, Jr., manager of the Mid-Central Division of A. H. Robins Company. Participating in the ceremony was Julian E. Upchurch of Durham, president of the North Carolina Pharmaceutical Association.

Ashworth's community activities include service as a director and past president of the Cary Chamber of Commerce. He has served as a member of the Wake County Board of Health and president of the Rotary Club.

In pharmacy, Ashworth is a member of the North Carolina and Wake County Pharmaceutical Associations and the National Association of Retail Druggists. He received his training in pharmacy at the University of North Carolina.

The Bowl of Hygeia, most widely recognized international symbol of pharmacy, derives from Greek mythology. Hygeia was the daughter and assistant of Aesculapius (sometimes spelled Asklepios), the God of Medicine and Healing. Her classical symbol was a bowl containing a medicinal potion, with the serpent of Wisdom (or guardianship) partaking of it. This is the same serpent of Wisdom which appears on the caduceus, the staff of Aesculapius which is the symbol of medicine.

The "Bowl of Hygeia" Award is a handsome mahogany plaque measuring 10 by 13 inches and featuring the Bowl of Hygeia cast in bronze. It is modeled after a sterling silver bowl made by a Mexican silversmith and given to A. H. Robins Company by its Latin American representatives in 1953.

A desire to encourage pharmacists to take active roles in the affairs of their respective communities prompted E. Claiborne Robins, chairman of the board, to establish the award in 1958. It is now presented annually by participating pharmaceutical associations in each of the United States, the District of Columbia, Puerto Rico and the 10 provinces of Canada. The recipients are selected by their respective associations.

True Pharmacy helps you celebrate Independence Day everyday.

In this era of mergers, consolidations, conglomerates and chains, there's still a lot to be said for independence.

If you're a pharmacist in business for yourself, you know all about it. Along with the long hours and endless decisions, there is still the joy of personally serving your customers and the pride that comes only from doing things the way you want them done.

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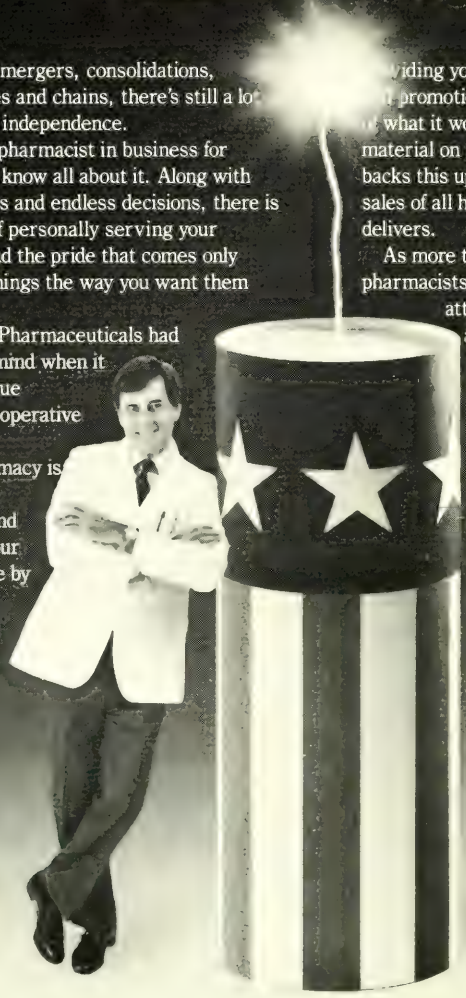
True Pharmacy is designed to preserve—and enhance—your independence by providing you with year-round advertising and promotional material for a small fraction of what it would cost you to prepare the material on your own. And True Pharmacy backs this up by guaranteeing 100 percent sales of all health and beauty items it delivers.

As more than 200 independent pharmacists from Tennessee to Florida will attest, True Pharmacy is every bit as good as its name. If you're not a participating member and would like more information, write or call Tom Koenig at (904) 731-4610 today.

It's our way of helping you celebrate your independence every day of the year.



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CAMPBELL UNIVERSITY SCHOOL OF PHARMACY REPORT TO THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION MAY 20, 1988 BY RONALD W. MADDOX, DEAN

FACULTY

The faculty of the School of Pharmacy currently consist of twelve full-time faculty members and numerous adjuncts from a variety of academic institutions and backgrounds. Additions to our faculty since last year include Drs. Thomas Holmes, Constance McKenzie, Emmanuel Obeng, and Fred Cox.

Dr. Thomas Holmes graduated from Duquesne University with a B.S. in Pharmacy and from the University of Michigan with a Ph.D. in Medicinal Chemistry. Dr. Holmes joined our faculty from the University of Minnesota College of Pharmacy where he received three excellence in teaching awards. He currently serves on our faculty as Associate Professor of Pharmaceutical Sciences and Director of Student Affairs.

Dr. Constance McKenzie received her Pharm.D. from Mercer University and completed a post-doctoral training program at the same institution. She has been instrumental in the development of our drug information program.

Our most recent additions to the faculty are Drs. Emmanuel Obeng and Fred Cox. Dr. Obeng graduated from the University of Georgia with a Ph.D. degree in Pharmaceutics. Prior to joining our faculty, Dr. Obeng was involved in post-doctoral training at the University of South Carolina College of Pharmacy with a B.S. and a M.S. He will receive his Ph.D. from the University of Georgia in Pharmacy Administration during their June graduation.

The School of Pharmacy has eleven additional faculty positions projected for next year. Faculty will be employed in the following disciplines: pharmacology, medicine chemistry, pharmacokinetics, nutritional support, pharmacy administration, cardiology, ambulatory medicine, geriatrics, and internal medicine (3). Five of these individuals have already been employed and the remainder will be hired during this year.

ENROLLMENT

Our second class entered in the fall. This class consisted of 70 students selected from 202 applicants. It is noteworthy that 85% of our admissions are North Carolina residents, 56% are females, 29% have a B.S. degree, and the overall grade point average for the class was 3.2. Our total enrollment is now 116. We are, also, pleased to have 82 pre-pharmacy majors at Campbell.

Ronald W. Maddox, Dean, Campbell University School of Pharmacy (Photo by Colorcraft).

DRUG INFORMATION

In January Campbell University held dedication ceremonies for its new Drug Information Center, which is located in the Carrie Rich Memorial Library on our campus. The activity was attended by Campbell University officials, pharmacists, community representatives, and administrative personnel from Glaxo, Inc.

Sponsored by a corporate grant from Glaxo, Inc., the Drug Information Center has as its primary purpose to provide a training site for pharmacy students. The Center is available to physicians, nurses, pharmacists and others in the health care field. The toll-free number in North Carolina is 1-800-327-5467. The Center will publish a quarterly newsletter which will be

continued on page 8

CAMPBELL UNIVERSITY

Continued from page 7

distributed to various pharmacy practitioners throughout the state. The Drug Information Center is under the direction of Dr. Constance McKenzie.

RESEARCH

Research activities are ongoing in the School of Pharmacy. This year Dr. Alan Richards has received funding for three grants from external sources. Also, Annie Pace, a second year student, was selected as a 1988 American Association of Colleges of Pharmacy Research Fellow. Annie will receive funding of $3,500 for her summer research activities.

PROFESSIONAL ORGANIZATIONS

Our faculty and students are very active in all professional organizations. In fact, we have 100% student membership in the North Carolina Pharmaceutical Association and American Pharmaceutical Association. The Student American Pharmaceutical Association Chapter recently received an award at the Annual American Pharmaceutical Association Meeting for their 100% participation in the organization. Mrs. Luanne K. Williams, a second year student, was also one of four students nationwide selected for a Kappa Epsilon Academic Scholarship.

During the year two profession fraternities joined our campus. Under the direction of Dr. Thomas Holmes a Phi Delta Chi Colony was initiated and a Kappa Psi Colony was begun under Dr. Fred Cox's direction. We welcomed both of these organizations to our new school.

CLERKSHIP TRAINING SITES

Through a coordinated program with the University of North Carolina at Chapel Hill School of Pharmacy, this fall our third year students will be trained in community and hospital pharmacy sites that surround our campus. These students will be impacting health care in: Fayetteville, Dunn, Coats, Lillington, Fuquay-Varina, Erwin, Benson, Angier, Smithfield, Selma, and Sanford.

ACCREDITATION

We recently had a visit from representatives of The American Council on Pharmaceutical Education, the accrediting body for schools of Pharmacy. Discussions were held with faculty, students, and university administrators. A survey was made of the physical facilities, the library, and the drug information center. The report we received was very positive and included this statement, "The School of Pharmacy is progressing satisfactorily and in accord with all expectations."

In summary, everything continues to go *extremely* well at Campbell University. Since my report last year, we have added four quality faculty members, initiated research activities, continued faculty and student involvement in professional organizations, and officially opened the Campbell University Drug Information Center. As stated in our accreditation report, "The School of Pharmacy is progressing satisfactorily and in accord with all expectations."

REPORT OF THE COMMUNITY PHARMACY COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

MINUTES
COMMUNITY PHARMACY COMMITTEE
March 20, 1988

The meeting convened at 2:00 p.m. at the Institute of Pharmacy. Members Present: Jim Aemone, Ralph Ashworth, Wayne Avery, Terri Bostick, Charles Delaney, Betty Dennis, Keith Kirby, Randy Lawson, Carl Taylor, Mickey Watts, *Chairman.* The following agenda items were discussed and recommendations made as indicated:

A. COMPUTERS.

Discussion: Issues related to telecommunication of third party reimbursement claims were discussed. The Association nees proactive efforts to prepare members for rapid changes in computer technology.

Recommendations: * The Association prepare and make information available to pharmacists in North Carolina concerning telecommunications (smart boxes) necessary for reimbursement of claims.

* Pharmacists should include in computer software and hardware maintenance contracts provisions for updates and changes to meet state and federal regulations.

B. PHYSICIAN DISPENSING.

Discussion: Physician dispensing activities in North Carolina were discussed. A recommendation presented last year to conduct a survey of activities was postponed until physicians register with the Board of Pharmacy. Current litigation concerning physician dispensing was reviewed. It

was noted the competition has increased and medications may be obtained at prices lower than those available through community pharmacies due to mail order and volume discounts.

Recommendations: * Pharmacists must develop and promote patient care services such as counseling, drug information and education. The personal professional relationship with the patient is the most important aspect of the dispensing process.

* The Association should conduct a survey to clarify issues related to physicians dispensing such as patient education and counseling, pricing, labeling, repackaging and use of technical personnel for dispensing.

C. MAIL ORDER MEDICATIONS.

Discussion: Pricing and patient services related to mail order medications were discussed. It was noted that large quantities of medications were often wasted when prescriptions were changed or discontinued.

Recommendations: * Pharmacists should document patient problems related to obtaining medications by mail order and forward information to the Association.

* Medications obtained by mail order should be limited to quantities necessary for a 30 day supply to reduce potential for abuse and medication wastage.

D. HOSPITAL AMBULATORY CARE.

Discussion: The expanding role of various hospitals into ambulatory care and other patient services was discussed. Opportunities for pharmacists in innovative patient care services such as home health care were noted. Economic and political issues related to expanded hospital services were identified.

Recommendations: * Pharmacists should discuss issues related to ambulatory care services with local hospital pharmacy directors and administrators.

E. WOMEN IN PHARMACY.

Discussion: The increasing number of women in schools of pharmacy was noted. The importance of selecting the best students for our profession was discussed. The personal sacrifices necessary for various pharmacy careers such as independent practice and leadership at all levels in the profession were identified.

Recommendations: * Pharmacy student recruiting films and materials should be made available to Association members. Materials should include career issues such as business ownership and management.

* Pharmacy schools should increasingly stress in the curriculum the importance of professional *involvement* and *leadership*.

* Pharmacy employers should encourage, support and reward professional involvement and leadership activities by pharmacists.

Issues related to PharmPac, Pharmacy Network and preferential pricing by major manufacturers were briefly discussed but no recommendations were made.

The meeting adjourned at 4:15 p.m.

Respectfully submitted,
Mitchell W. Watts, *Chairman*
Betty H. Dennis, *Liaison to Executive Committee*

Jim Aemone	Randy N. Lawson
Ralph H. Ashworth	Ed Lowdermilk
Wayne Avery	John E. Malone
Alan G. Banner	Rad Rich
Terri Bostick	Stuart W. Rollins
David Cox	Carl Taylor
Connie Daughty, R.Ph.	Lori Tutterow
Charles F. Delaney	Mitchell Harris Walker
Keith E. Kirby	Ronald J. Winstead

CHIEF EXECUTIVE OFFICER:

Missouri Pharmaceutical Association seeks qualified candidates for position of Chief Executive Officer. Full-time salaried position with some administrative duties for Foundation for Pharmaceutical Care, a Missouri-based PSAO. Candidates must demonstrate executive leadership abilities, good oral and written communication skills, and knowledge of the political-legislative-regulatory process. Pharmacist preferred. Submit resume, references, and compensation requirements to: Search Committee, Missouri Pharmaceutical Association, 410 Madison St., Jefferson City, Mo. 65101. Deadline for applications Oct. 1, 1988.

INTERNSHIP PROGRAM ESTABLISHED

The R.J. Reynolds Tobacco Company, through the Winston-Salem Health Care Plan, Inc., has established a special summer pharmacy internship program with the School of Pharmacy at the University of North Carolina at Chapel Hill. The 1988 summer intern is Robin Leigh Ferguson of Rural Hall, N.C., a rising second year student at the School.

NOTE: Shown Presenting the internship award are Roger H. Sloop, director of pharmacy services and Clifford R. Gray, vice president and medical director, both of the Winston-Salem Health Care Plan, Inc., with Tom S. Miya (center), dean of the School of Pharmacy.

PHARMACY EMPLOYEES, ARE YOU LISTENING?

Excerpt from Ann Landers, Charlotte Observer, May 20, 1988

Dear Ann: I am a 28-year-old male who tested HIV positive. My doctor prescribed the drug Retrovir in an attempt to help control replication of the virus. Every time I take the prescription to the pharmacy I'm a wreck. The drug costs about $400 a month. The expense I can handle, but the attitude of the pharmacy employees I cannot.

When the clerk rang up my first prescription she shouted at the top of her lungs, "My God, $400! What is this stuff anyway?" The next month I changed pharmacies, but the clerk's reaction was the same. I am on my fourth pharmacy and looking for another.

Ann, will you please ask all pharmacists to instruct their employees on the proper behavior when dealing with customers? They should demonstrate the same confidentiality that one expects in a physician's office. — **A Reader**

Dear Reader — The kind of insensitivity you describe is inexcusable. You should have gone to the managers of each of those drugstores and reported the clods.

I hope that every person who works in a pharmacy will pay attention to your letter and from here on in treat each customer with consideration.

REPORT OF THE ETHICS, GRIEVANCE AND PRACTICE COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

The 1987-88 Ethics, Grievance and Practice Committee met on January 17, 1988 to review comments by the pharmacists of the state of North Carolina on the Code of Ethics of the NCPhA and the 1986-87 report of this committee. No negative comments had been received nor were there refusals to sign the Code of Ethics on the membership renewals.

The committee reviewed a request by a NCPhA Member encouraging the association to lead the fight against workplace tendencies that deviate from ethical behavior. The committee agreed to request that pharmacists should report such behavior to the committee for review. The letter is included with this report and will be published in the *Carolina Journal of Pharmacy*.

The committee reviewed its resolution (see attached) to be voted on at this convention and continues its support of that resolution.

In order to comply with the goals of this committee, the committee requested that the Board of Pharmacy send a copy of the public records to the committee for its review of ethical violations of NCPhA members. On March 21, 1988, the Board approved our request and will forward the public records at a timely basis after the time for appeal has lapsed. These records will be sent to the chairman of the committee who will then call a meeting to review the records.

The clipping service brought to our attention a case from the State Superior Court. Since the Board of Pharmacy will review this case, action was delayed until the Board forwards the case to us.

A special meeting was called on April 10, 1988 to review a case from the U.S. District Court concerning a member of the NCPhA. The committee decided to seek voluntary compliance with the Code of Ethics by this member.

After this meeting had been scheduled and the information concerning it had been disseminated, the chairman received the requested public records from the Board of Pharmacy. Since time did not allow the committee to review the seven cases concerning members prior to the meeting, action was delayed until the next meeting.

Our first case showed that administrative procedures need to be reviewed and revised to facilitate the handling of future cases. Such fine tuning will be a continuous task of the committee. Furthermore, the continuance of cases from one meeting to the next as we have had to do, furthers our need for the passage of our resolution. Unless continuity of the committee occurs, the committee's tasks will become burdensome and cumbersome with each new committee having to educate itself about previous cases and dispositions as well as continued cases from one year to the next.

Respectfully submitted,

Thomas R. Thutt, *Chairman*

Loni T. Garcia
C. E. Hemingway
Andy Hunter
Wayne Pittman
Max Reece, Jr.

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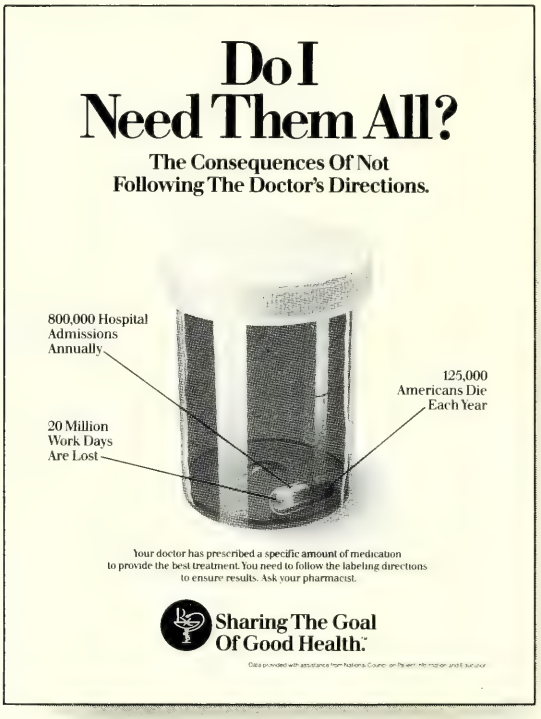
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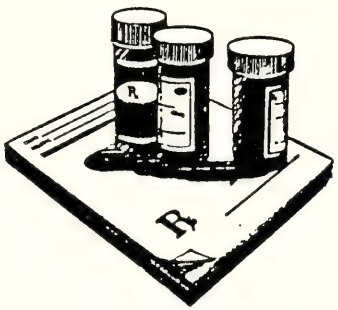

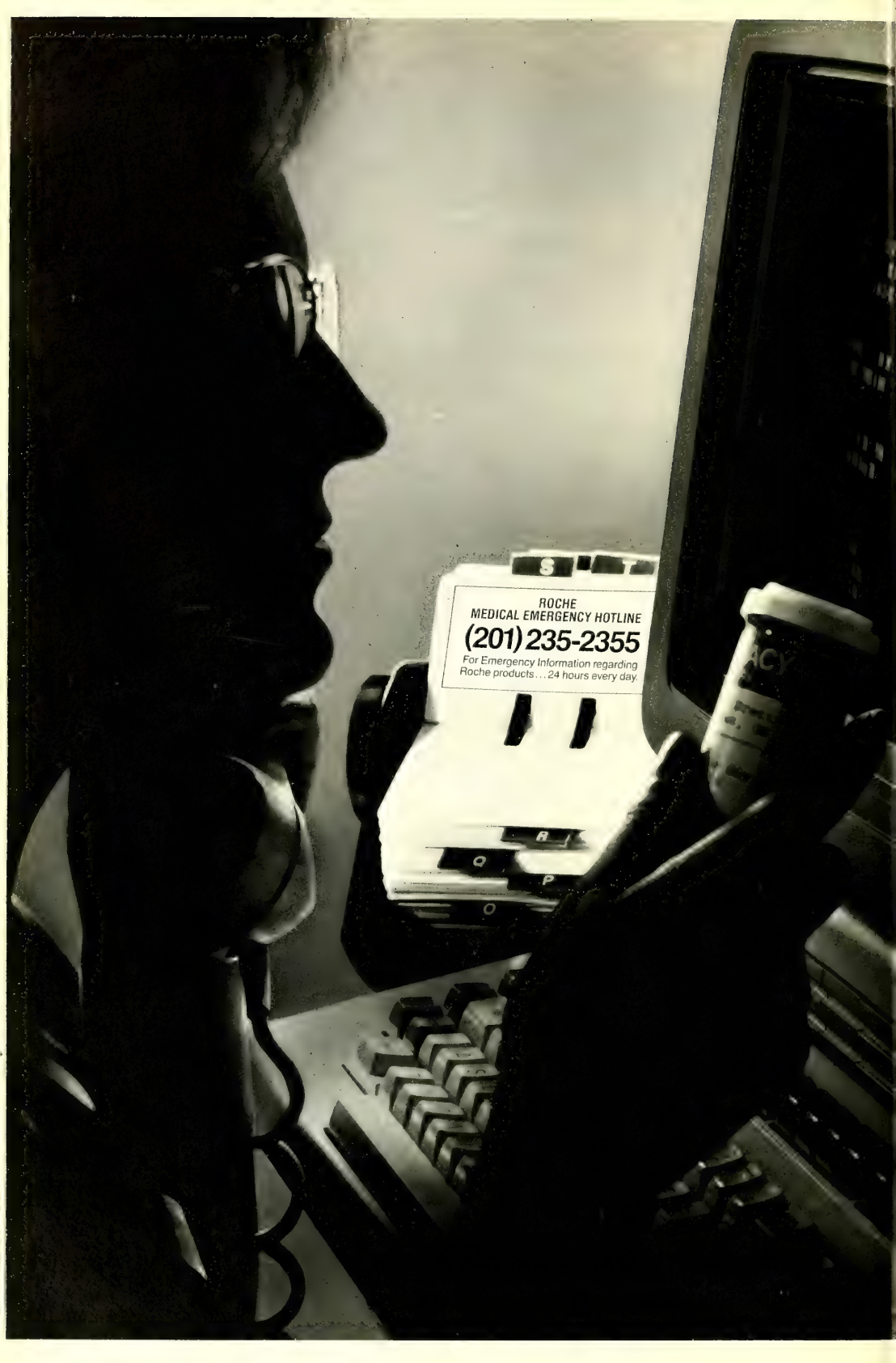
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CORRESPONDENCE COURSE
NEW DRUG UPDATE 1987-1988: PART II

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University, Ada, OH
and
J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to discuss new drugs approved by FDA and/or marketed in 1987 and 1988.

Objectives

At the conclusion of this lesson, the participant will be able to:

1. demonstrate knowledge of the drugs by pharmacologic and therapeutic classification;
2. identify their indications, mechanism of action, pharmacokinetic properties, benefits and limitations;
3. identify adverse effects and drug interactions associated with the drugs; and
4. demonstrate an ability to counsel patients on the drugs presented.

This is the second of a two-part series on new drugs approved and/or marketed in 1987 and 1988. Part I discussed cardiovascular and anti-inflammatory agents.

ANTI-INFECTIVES

Azactam (aztreonam)

Azactam is the first member of a new chemical class of antibiotics called the monobactams. The monobactam structure contains a *mono*-cyclic *b*eta-l*actam* nucleus and is structurally distinct from other beta-lactams such as penicillins and cephalosporins.

The drug possesses potent activity against numerous gram negative aerobic pathogens. As with other members of the penicillin family, antimicrobial activity results from inhibiting cell wall synthesis. The drug does not stimulate beta-lactamase activity, and is reportedly resistant to hydrolysis by these enzymes. This expands its spectrum of activity to penicillinase and cephalosporinase-producing organisms.

Azactam is bactericidal for a wide variety of infections caused by Citrobacter sp., *Escherichia coli,* Enterobacter sp., *Haemophilus influenza, Serratia marcescens,* and other organisms. It is indicated for treatment of susceptible infections of the urinary tract, lower respiratory tract, and skin and skin structures; for septicemia, intra-abdominal and gynecologic infections; and for adjunctive therapy to surgery. Concomitantly-administered aminoglycosides are synergistic against many pathogens.

Patients with a history of hypersensitivity to any penicillin or cephalosporin should be monitored closely if they receive Azactam. Allergic reactions are unlikely, but possible. Probenecid decreases renal secretion, resulting in elevated anti-biotic blood levels. Probenecid interacts similarly with other penicillin and cephalosporin antibiotics, but the effect is therapeutically insignificant, unless gonorrhea is being treated.

Bactroban (mupirocin)

This topical antibacterial has a broad spectrum of activity, especially against gram-positive organisms that cause dermal infections. It is structurally unrelated to any other antibiotic. Current data indicate that it is a safe and effective alternative to other topical antibiotics for impetigo and similar dermal infections. An advantage is that it has not demonstrated the hypersensitivity reactions seen with neomycin.

Cefmax (cefmenoxime)

A third generation cephalosporin, Cefmax shares a similar therapeutic profile with other members of this group. Since there are numerous other third generation cephalosporin products on he market, the role and place for Cefmax remains to be seen.

Cipro (ciprofloxacin) and Noroxin (norfloxacin)

These "second generation" quinolones are the first of a series of similar broad-spectrum fluoro-

quinolone antibacterials. Earlier marketed quinolones include NegGram (nalidixic acid) and Cinobac (cinoxacin). Cipro and Noroxin have much greater antimicrobial activity. Also, the potential for development of resistance is greatly reduced as compared to older drugs.

Both drugs are bactericidal against a broad spectrum of gram positive and gram negative organisms including *Citrobacter freundii,* Proteus sp., *Pseudomonas aeruginosa,* Staphylococcus sp., and Streptococcus sp. Ciprofloxacin is claimed to be about four times more active than norfloxacin in *in vitro* studies.

Both drugs bind to the bacterial enzyme DNA gyrase (Figure 1), inhibiting its activity. Since this enzyme converts relaxed (inactive) DNA into its structurally active (supercoiled) form, the quinolones terminate the conversion, and therefore kill the bacteria.

These agents reportedly have few adverse effects. Approximately 3 to 9 percent of patients in clinical trials experience headache, nausea and vomiting, diarrhea and dizziness, but this is considerably less than that seen with nalidixic acid.

Cipro and Noroxin are administered orally. This is important because both products are being vigorously promoted as being safer, more convenient, and less expensive than traditional injectable antibiotics used against these organisms. In the era of cost containment, this should be a powerful marketing tool for hospital and nursing home patients.

Lamprene (clofazimine)

Lamprene is indicated for treatment of *Mycobacterium leprae*, the organism that causes leprosy. It is also used to treat a wide variety of other difficult-to-manage infections, including certain opportunistic ones associated with AIDS. The drug binds to mycobacterial DNA and its action is bactericidal. By an as yet unidentified mechanism, Lamprene also imparts anti-inflammatory action on the nodules of leprosy.

The drug is reported to cause a number of adverse reactions. Dermal pigmentation appears in a significant number of patients within a few weeks of treatment. In Caucasians, the skin often changes to pink-red, then brown-black coloration. Conjunctiva, tears, sweat, urine, and feces may also be colored. This is reversible upon discontinuation of the medication, although return to normal skin color may require months to years.

Lamprene is taken orally in doses of 100 to 200 mg/day. When used for the treatment of leprosy, it is often given in combination with dapsone.

Retrovir (zidovudine)

Formerly known as azidothlymidine (AZT), zidovudine is the first drug in the U.S. officially indicated for the treatment of AIDS. Its generic name was changed because another substance had previously been assigned that terminology.

To briefly explain its mechanism of action, thymidine is one of the four nucleotides that occurs in all strands of DNA, including those of the AIDS virus (HIV-*H*uman *I*mmunodeficiency *V*irus), and humans. With Retrovir, the hydroxy group contained in thymidine has been replaced with an azide group. Retrovir is enzymatically incorporated into DNA by retroviral transcriptidase of the HIV. Because of its structural dissimilarity to thymidine, DNA replication is thereby terminated and viral growth halted. Human DNA polymerase is likewise affected, but the drug has a preferential affinity for the HIV enzyme, reportedly being 1000 times greater than for human cell DNA replication.

Retrovir treats, not cures, AIDS. Patients can still develop opportunistic infections. Because of this, they should report any changes in health to their physician. However, Retrovir-treated patients live longer and enjoy a greater quality of life during the period of treatment. Many treated AIDS victims have lived longer than expected.

The drug does produce toxicity. Paramount are blood dyscrasias including granulocytopenia and anemia, which can limit therapy. This can also greatly increase the cost of an already expensive therapy due to the need for blood transfusions. Subjective responses most often reported are nausea and headache. Both occur in over 40 percent of patients, but they are also common symptoms experienced by nontreated AIDS victims.

Drug interactions have been reported. Two that must be considered include other drugs that depress bone marrow function (e.g., nephrotoxic and cytotoxic drugs such as antineoplastics and immunosuppressants); and drugs that affect the glucuronidation of zidovudine. The latter group includes acetamlinophen, aspirin, indomethacin, and probenecid. This interaction provides an opportunity for patient counseling since persons receiving Retrovir should be informed not to self-medicate for pain, headache, and fever. Ibuprofen has not been implicated in this interaction but the physician should be the judge as to whether it is an acceptable alternative.

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CORRESPONDENCE COURSE

Continued from page 19

To be effective, compliance, while difficult, is absolutely essential. Retrovir must be taken without interruption, 200 mg every 4 hours around the clock.

Terazol-7 (terconazole)

Terazol-7 belongs to a group of antifungal agents called the triazoles. While similar to the other dozen or so "azoles," they may have greater activity against candida and tinea organisms. Terazol-7 is indicated for treatment of vulvovaginal candidiasis. Comparative studies with the drug indicate that it is equal to or more effective than older drugs such as clotrimazole and ketoconazole.

Unasyn (ampicillin/sulbactam)

This product combines a beta-lactamase inhibitor (sulbactam) with ampicillin. It joins a growing list of similar products (amoxicillin/clavulanate potassium — Augmentin; ticarcillin/clavulanate potassium — Timentin) that combine an enzyme inhibitor with an antibiotic. Other products containing these or other beta-lactamase enzyme inhibitors, with other penicillins or cephalosporins, will probably follow in the future. Adding a beta-lactamase inhibitor to a penicillin or cephalosporin antibiotic reinstates their effectiveness against bacteria that have become resistant.

Unasyn is indicated for parenteral treatment of infections caused by penicillinase-producing organisms that are susceptible to ampicillin. Sulbactam is only weakly antibacterial; its purpose is to preferentially bind with beta-lactamases, thereby sparing the antibiotic from degradation.

RESPIRATORY DRUGS

Atrovent (ipratropium)

A synthetic quaternary ammonium derivative related chemically and pharmacologically to atropine, Atrovent is an anticholinergic agent that blocks acetylcholine at peripheral cholinergic receptor sites. A pharmacologic response to such action is relaxation of bronchial smooth muscle. Thus, Atrovent, administered by aerosol inhalation, is indicated for maintenance treatment of bronchospasm associated with chronic obstructive pulmonary disorders. It is not intended to be used to reverse bronchospasm where a rapid response is needed. The adrenergic bronchodilators (e.g., Alupent, Bricanyl) are agents of choice for that.

Since it is administered by inhalation, Atrovent is not absorbed to any great extent. Systemic adverse reactions are consequently minimal. Ones that have been reported include nervousness (3 percent), dizziness and headache (2 percent), and nausea (3 percent). There are reports indicating that dry mouth occurs in some patients using the drug, but no where near the level seen with systemically administered atropine-like drugs.

Prolastin (alpha$_1$-proteinase inhibitor)

Produced by recombinant DNA technology, Prolastin is used for selected cases of emphysema. The drug is aimed at a small group of emphysema patients whose disorder is due to a genetic deficiency. There are probably less than 27,000 Americans with this condition.

Alpha$_1$-proteinase inhibitor is naturally produced in the liver of most people. It circulates through the body in the blood, functioning to inactivate elastase, an enzyme that helps destroy bacteria in the lungs. When the enzyme is deficient, elastase is left unopposed and attacks lung tissue, destroying its elastic properties, and severely reducing the lung's breathing capacity. Prolastin corrects the deficiency and alleviates the emphysematous condition.

MISCELLANEOUS AGENTS

Deursil (ursodiol)

This agent dissolves cholesterol-based gallstones. It joins chenodiol (Chenix) and monooctanoin (Moctanin), two other drugs indicated for this use.

Like Chenix, Deursil is administered orally. Moctanin is administered directly into the gallbladder by retrograde infusion using tubes inserted therein. In the gallbladder, Deursil interferes with cholesterol binding, thereby dissolving the stones. It, and the others, are only effective for gallstones that are primarily composed of cholesterol, rather than those with high calcium content. This can be easily determined by x-ray. The calcium-dominant stones show up as dark solid objects while cholesterol stones are translucent. Patients with the latter type who cannot or will not undergo gallbladder surgery are candidates for Deursil.

Iopidine (aplonidine)

Aplonidine reduces intraocular pressure. The ophthalmic solution is indicated for reducing intraocular pressure spikes that occur following laser eye surgery.

Humatrope (somatropin)

Somatropin (growth hormone) and its synthetic analogues promote skeletal, visceral, and general body growth. A deficiency results in pituitary dwarfism; excessive hormone causes gigantism. Unlike some other endocrine hormones, growth hormone is species-specific. This means that replacement hormone must be obtained from the pituitary gland of human cadavers rather than animal sources.

In May, 1985, manufacturers of human pituitary-derived somatropin announced that these products would be discontinued because of the possibility that they transmitted a rare, lethal virus. Shortly thereafter, somatrem (Protropin), a growth hormone product of recombinant DNA technology, was approved and marketed.

Somatropin, a similar but slightly different analogue of human growth hormone produced by recombinant DNA technology, has now entered the market for use in children with endogenous growth hormone deficiency. It is not intended for use in adults, or for any purpose other than replacement therapy.

Metrodin (urofollitropin)

This gonadotropin is indicated for reversing infertility in patients with the polycystic ovarian syndrome (POS) who fail to respond to clomiphene. The POS is characterized by an improper LH/FSH ratio. Briefly, FSH (follicle stimulating hormone) causes graafian follicles to form and grow. LH (luteinizing hormone) stimulates further growth, maturity, and release of the developed egg into the fallopian tube. Women with POS ovulate immature ova which cannot be fertilized by sperm. Since urofollitropin stimulates ovarian follicular growth, the resulting ova are mature and hopefully, capable of fertilization.

As with previous fertility agents (i.e., Clomid, Pergonal), multiple ovulations and pregnancies are possible. In clinical trials, 17 percent of pregnancies resulted in multiple births.

The drug is administered IM once a day for 7 to 12 days. The day after the last dose of urofollitropin, a dose of human chorionic gonadotropin (hCG) is given to initiate ovulation.

Novantrone (mitoxantrone)

Novantrone is officially indicated for treatment of nonlymphocytic leukemia. However, it is also being used outside the U.S. for breast cancer and is marketed for that purpose in 35 other countries. This may eventually be an indication in this country as well. Promising results are also reported for Hodgkin's disease.

The precise mechanism of pharmacologic action is unknown. Like doxorubicon, mitoxantrone crosslinks with DNA between base pairs of the DNA double-helix, inhibiting nucleic acid synthesis.

ProHIBIT (Haemophilus b conjugate)

Haemophilus influenzae type b is a primary cause of meningitis in children under age 5 years. The new conjugate vaccine is indicated for prophylaxis of infections in children 18 months to 5 years. It appears to more actively stimulate the body to produce antibodies against Haemophilus organisms than previously available vaccines. It is the first such vaccine to be approved for use in children under 2 years of age, and its manufacturer is reportedly awaiting approval for use in children 6 months of age, and possibly younger.

Prozac (fluoxetine)

Since it has become vogue to refer to newly developed drugs as being "second" or "third" generation entries, similar terminology can be applied to Prozac as well. The first generation antidepressants were the tricyclics (e.g., Elavil, Tofranil); second generation drugs were Asendin, Desyrel, and Ludiomil.

It has been speculated, and there is supportive evidence, that some depressed patients have lower levels of serotonin within the CNS. Interestingly, autopsies of person who committed suicide showed a significantly lower concentration of serotonin in their bodies as compared to other persons who died of natural causes.

Prozac inhibits neuronal uptake of serotonin within the CNS. It also reduces uptake of serotonin into its other major storage compartments — platelets. It has no effect on norepinephrine or dopamine. The biogenic amine theory of affective mental disorders holds that if depression is caused by insufficient extracellular serotonin, preventing its uptake into cellular storage sites will correct the imbalance and reverse the depression.

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CORRESPONDENCE COURSE

Continued from page 21

The drug is indicated for the same types of depression as the other antidepressants. It may be an alternative for patients who cannot tolerate tricyclic-induced side effects. Since it does not react with cholinergic and histaminergic receptors, the classic side effects and toxicities of the tricyclics have not been seen.

In clinical trials, and in other countries where it has been available, fluoxetine has demonstrated significant anorexiant (appetite suppressing) effect. This is an interesting phenomenon because depression often leads to overeating, and antidepressants sometimes cause weight gain.

Prozac acts at the same areas of the brain as fenfluramine (Pondamin), but it is even more active. There is strong evidence that Prozac will eventually be used more to treat exogenous obesity than depression given its lack of abuse potential.

Ucephan (sodium benzoate/ sodium phenylacetate)

This combination of ingredients is indicated for prevention and treatment of hyperammonemia in persons with deficiencies in urea metabolism. Given by IV infusion, the drug neutralizes ammonia ions (by-products of protein metabolism) and prevents their excessive build-up, increased blood pH, brain damage, and death.

Summary

New drugs approved by FDA and/or marketed during 1987 and 1988 represent a variety of exciting therapeutic agents. Hopefully the new drugs for successive years will be as challenging.

CORRESPONDENCE COURSE QUIZ

NEW DRUGS: PART II

1. Quinolone antibacterials act by inhibiting:
   a. DNA polymerase.
   b. reverse transcriptidase.
   c. DNA gyrase.
   d. alpha proteinase.
2. All of the following points of information are proper for counseling patients receiving a prescription for Retrovir EXCEPT:
   a. Take the capsules every four hours around the clock.
   b. Check with your doctor before self-medicating with OTC analgesics.
   c. Since this drug treats but does not cure your condition, report any changes in health to your doctor.
   d. Take this medication with meals and at bedtime with a snack.
3. Prozac exerts its action by inhibiting cellular uptake of:
   a. dopamine.
   b. gamma-aminobutyric acid.
   c. norepinephrine.
   d. serotonin.
4. Hypersensitivity (allergy) to Azactam is most likely to occur in a patient who is hypersensitive to:
   a. aminoglycosides.
   b. cephalosporins.
   c. erythromycins.
   d. tetracyclines.
5. The drug that reportedly causes dermal pigmentation is:
   a. Lamprene.
   b. Novantrone.
   c. Retrovir.
   d. Ucephan.
6. Atrovent acts by:
   a. blocking adrenergic receptors.
   b. blocking cholinergic receptors.
   c. stimulating adrenergic receptors.
   d. stimulating cholinergic receptors.
7. The antibacterial agent that was recently approved for topical use in treating impetigo is:
   a. Bactroban.
   b. Lamprene.
   c. Terazol-7.
   d. Unasyn.
8. The drug that is indicated for reversing infertility in patients with the polycystic ovarian syndrome is:
   a. Humatrope.
   b. Metrodin.
   c. Novantrone.
   d. Prolastin.
9. The two recently approved drugs that are most similar chemically and pharmacologically to each other are:
   a. Atrovent & Deursil.
   b. Bactroban & Terazol-7.
   c. Cipro & Noroxin.
   d. Humatrope & Metrodin.
10. The product that contains a beta-lactamase inhibitor is:
    a. Azactam.
    b. Bactroban.
    c. Terazol-7.
    d. Unasyn.

WEDDINGS

The wedding of SARAH JANETTE BEALE and JERREL WOOD COBB, JR. took place on April 16, 1988 at Courtland United Methodist Church in Courtland, Virginia. Sarah is a 1984 graduate of the UNC School of Pharmacy and Jerrel is a 1982 graduate. The couple will live in Southern Pines.

NANCY SUE FITZGERALD and Kurt Douglas Myers, both of Winston Salem were married Saturday, June 4, 1988 at First Assembly of God Church in Winston Salem.

The bride, a graduate of the University of North Carolina at Chapel Hill School of Pharmacy, is a pharmacist at Eckerd Drug. The bridegroom, who attended High Point College, works at R.J. Reynolds Tobacco Co.

BIRTHS

STUART "AL" HAMM and Susan Hamm of Greenville announce the birth of their daughter, Anna Elizabeth, born on February 16, 1988, weighing 7 pounds and one ounce. "Al" is a 1985 graduate of the UNC School of Pharmacy and is employed by Kroger Sav-On in Greenville.

MARGARET DAUGHERTY LeDOUX (Class Of 1983) and John LeDoux announce the birth of their son Michael Phillip LeDoux on Friday, June 10th at Forsyth Memorial Hospital in Winston Salem. He weighed 7 lbs. 8 oz. and was 20½ inches long.

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Please circle correct answers

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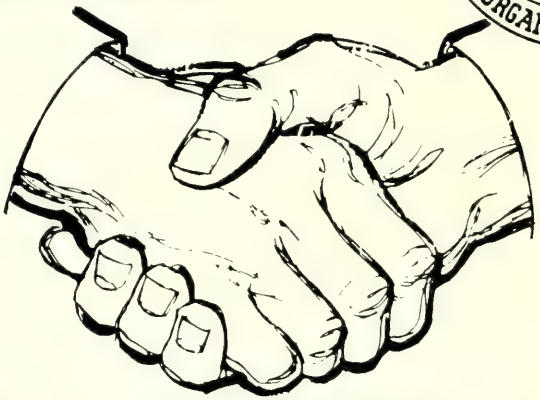

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BADGER ACCOMPANIES 40 VIPS TO BAVARIA

Schering representative, Gus Ballus (left) presents award to Michael Badger (right), winner of the Schering Corporation's 1987 Sweepstakes.

J. Michael Badger, President-Pharmacist of the Jefferson Drug Stores, Inc. joined 40 VIP (Very Important Pharmacists) and their guests on a week long trip to Bavaria early in November, 1987 sponsored by Schering Corp. To become a winner Badger correctly answered the question "What long acting cold tablet do you recommend?" The correct answer Drixoral is one of Schering Corporation's leading over-the-counter medications.

The Peoples Rexall Drug Store was one of 55,000 pharmacies in this country to receive a sweepstakes entry form from Schering Corporation.

Local Schering rep Gus Ballus is shown presenting the award to Mr. Badger. Mr. Badger is a 1970 graduate of UNC School of Pharmacy.

He began work at Peoples Rexall Drug Store in West Jefferson, N.C. in 1972. He lives in Jefferson, N.C. with his 15 year old son, Chan. He also has a 22 year old daughter, Andrea. Michael's hobbies are coaching Little League Baseball and "following the Tar Heels."

NEWS BRIEFS

American Academy of Ophthalmology and 4 drug makers have developed a color coding standard to make eye drop packages more distinctive to avoid patient confusion. Red package will indicate mydriatics, green for miotics, yellow and/or blue for beta blockers, brown and/or tan for antibiotics and gray for non-steroidal antiinflammatory drugs.

A Study was funded by the Veterans Administration to review patient compliance with prescribed drug regimens. It was found that some patients take TID drugs all at once to avoid forgetting later doses; some skip late-night dose of a Q6H drug to avoid getting up at night; and others skip one dose of a multi-dose regimen that is linked to meals, because the patients didn't eat 3 meals a day. Married men were less compliant than unmarried men. 90% of the patients studied knew the purpose of their regimens, but many of them did not take the medications.

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DICKINSON'S PHARMACY
by Jim Dickinson

Mail-order generics. "A generic R is a vote for mail-order pharmacy." Could it come to that? Some powerful people in both the generic and the mail-order drug industries appear to think so.

Thier collaboration is something for pharmacists everywhere to think about, especially as the mail-order pharmacy companies settle down to a hard-sell campaign directed at employee benefits and other third-party health programs.

Their bottom line is sheer, "unbeatable" economics. Because of splendid deals that they're getting from some of the generic drug companies that are scrambling all over each other to sell a big annual contract to mail-order firms that ship millions of prescriptions a week, mail-order pricing is wonderful.

One major company now boasts that it can supply at 40% off discount retail, and one of its smaller sub-programs provides presription coverage at absolutely no cost to the recipient whatever.

The more you use, the less it costs. So there's a bit of wastage — so what? Our prices are so low you could have 50% wastage and still be way in front in dollars!

It's happening this way because of new economics that have hit the generic drug companies.

Flushed with success from the onrush of big dollars out of the Waxman-Hatch Drug Price Competition and Patent Term Restoration Act of 1984 that gave them access to "new" old (post-1962) drugs for the first time, generic drug companies invested heavily in new facilities and marketing campaigns.

Some of the innovator companies felt they could not compete head-to-head (they must fund new R&D from somewhere), so they responded by settling for a smaller market share at higher prices — widening the comparison gulf between their products and the generics.

All that could only go on for so long. The market established a kind of natural equilibrium last year. At the same time, FDA began releasing more blockbuster therapies that superseded some of those post-1962 "new" old drugs. You know the names.

Weaker generic companies began to fall by the wayside. Bigger ones gobbled up smaller ones. Some were even bought by innovator companies.

Now we are at "absolute minimum pricing" in a commodity market with no fat.

No fat, that is, unless you are a generic house that can suddenly get colossal volume that will pay for all those expensive new facilities with dollars from product margins that are vanishingly slim.

And where would a generic company find such instant volume? Why, the mail-order drug houses, of course. They're doubling their volume every year, and some boast there will be no drug wholesalers in the future. This is a runaway freight train that can't be stopped!

And so it came to pass that, under the balmy blue skies of Puerto Rico in a bright and brassy January, the mail-order people and the generic drug people gathered together to wheel and deal at the biggest annual convention of their trade association in history.

All the most imaginative drug chains were there, too. What did they decide? We'll never know. There are no minutes kept of deals made over a banana daiquiri.

Of one thing we can be certain, however. "Absolute minimum R pricing," a mail-order monopoly, will be heard from. The folks doing the listening will be the benefits managers and the fiscal intermediaries.

But before you sell your pharmacy to Exxon for a gas station, think about the drug innovator's strategy when confronted with new generic competition.

They resisted the temptation to chase prices down to rock-bottom. Pharmacists who show the same resistance should think about what else they have to offer, in lieu of discounts.

Why should I, Harry D. Pressed, national employee benefits manager for General Truck Hamburgers, agree to pay more for your commodity than I can get it from mail-order for?

Because, Harry, neighborhood pharmacy has a better mousetrap. We have services that lower your exposure to liability. And we have effective drug utilization review through our PSAO that reduces your overall expenditures on other costs such as absenteeism due to illness, unnecessary hospital and doctor visits. . . And guess what, Harry? We have to live with our patients (your employees and retirees) and look them in the eye every time they come in. We have to worry about them being verbally unhappy in front of our other patients.

We look after them. We have to. We *see* when they're worse and when they're better. And these aren't just commodities we're putting in their bodies. These "items" are potent, and they inter-

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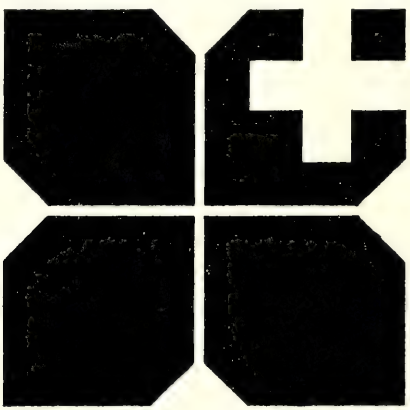

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DICKINSON'S PHARMACY

Continued from page 27

act with other "items" that can really mess somebody up. . .

If you think it's hard to sell this line, what do you think of the Blue Cross/Blue Shield manager who called me recently, solely because she thought the mail-order company's story she had just heard was a little too good to be true?

And how about the generic industry leader who wondered what retail pharmacy might do if it found out that mail-order houses were getting better price breaks even than wholesalers?

My belief is you get what you pay for, mostly.

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DIRECTOR OF PHARMACY: Pungo District in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Pharmacy. Salary negotiable and commensurate with experience. Interested parties should contact the adminstration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

PHARMACIST WANTED: Director of Pharmacy for 64-bed hospital in Southeastern North Carolina. Excellent hours, salary negotiable, and good fringe benefits. Contact Tom Smart at (919) 582-1776.

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NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

NEED A PHARMACIST?: Pharmacist is interested in becoming a permanent floater for corporation or hospital. Has 20+ years of experience. Licensed in NC and SC and will have VA license in June. Will do relief work for retail/hospital position. If you are in need of such a person please contact Box CBD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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CLASSIFIED

Continued from page 31

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Betsy Mebane (left) receives a Life Membership Award from the Woman's Auxiliary in recognition of her outstanding service to the auxiliary, presented by Erie Cocolas. Photo by Colorcraft. (Story on page 19) ***See also Highlights of the 1988 Woman's Auxiliary Convention on page 17.***

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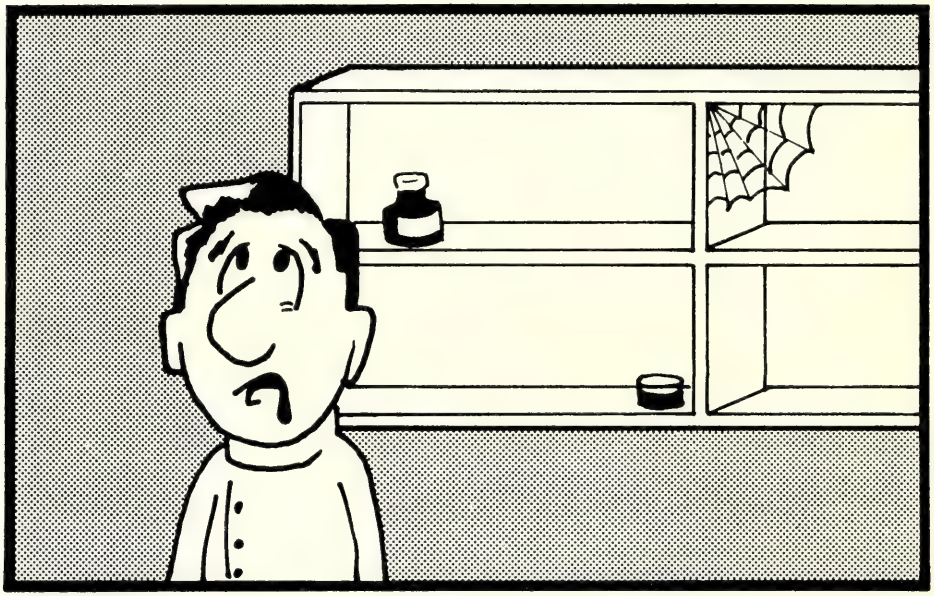

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NCPhA President, Al Lockamy, leads a group discussion during the first NCPhA Leadership Workshop. (Staff photo).

NCPhA Leadership Workship director, John Mackowiak, elaborates on the committee structure of NCPhA. (Staff photo).

NCPHA LEADERSHIP WORKSHOP
June 22, 1988

Thirteen newly installed NCPhA officers met at the Institute of Pharmacy on June 22, 1988, for an all day NCPhA Leadership Workshop directed by Fred Eckel and John Mackowiak. The primary objective of the workshop was to "improve the leadership structure, process, and outcomes of NCPhA elected and appointed officials," explained John Mackowiak.

NCPhA officers and committee chairpersons in attendance were: President Al Lockamy, Ralph Ashworth, Linda Griffin, Dan Teat, Terri Bostick, Rick Sessions, Roger Sloop, Logan Womble, Sarah Beale Cobb, Frank Burton, Phil Crouch and Steve Dedrick.

President Al Lockamy presided over the first session of the day by familiarizing those present with the NCPhA Constitution and By-Laws, focusing on recent changes proposed at the NCPhA Convention in May. Al also outlined the various NCPhA committees and discussed the purpose and function of each.

The small group format dominated much of the workshop in order to allow meeting participants to discuss various topics on a more intimate level. The discussions covered:

- a strategic plan to help guide NCPhA through the upcoming year
- a study of NCPhA's Mission statement as compared to APhA's
- an evaluation of NCPhA's Committee structure, i.e., what parts of NCPhA's structure need improvement and/or what are some possible alternatives?

As a result of the small group discussions, pharmacy leaders updated NCPhA's Mission statement to more accurately reflect the Association's objectives, today, as well as keep NCPhA's Mission in line with APhA's. A proposal was also presented to disband the Women in Pharmacy Committee. Since the proportion of women in pharmacy has dramatically increased, it was felt that a separate committee is no longer needed to address issues unique to women in NCPhA; rather, the interests of women pharmacists reflect the interests of the organization as a whole.

Participants were also asked to identify the strengths and weaknesses of NCPhA for the purpose of assisting officers in developing their committee goals for the upcoming year. A summary of their ideas is listed below.

STRENGTHS OF NCPHA

- the largest organized group of pharmacists in North Carolina
- provides membership services for *all* pharmacists in North Carolina versus a particular subset of pharmacists.
- maintains a broad range of committees, most importantly, the Legislative Committee to monitor legislative proceedings affecting NC pharmacists (many other states don't have a Legislative Committee)
- the Physician Dispensing Bill sponsored by the Legislative Committee
- an excellent job referral source
- good public image
- has strong support from NCPhA student branches
- good facilities
- a history of successful lobbying efforts
- a large percentage of pharmacists in the state are members of NCPhA in proportion to the number of pharmacists registered in NC

WEAKNESSES OF NCPHA

- poor internal and external communication
- limited success in "selling" NCPhA to pharmacists who are nonmembers
- less than desirable participation of NCPhA members in NCPhA events, functions, etc.
- less than desirable registration for NCPhA Annual Convention
- too much turnover of committee members, not enough member longevity

Having reached a consensus about NCPhA's strengths and weaknesses, officers gained a clearer understanding of how to direct their efforts as a united group towards the accomplishment of common goals in a common direction.

Guest speaker, Tom Hughes, Director of Pharmacy at North Carolina Memorial Hospital in Chapel Hill, closed the workshop with a philosophical discussion on "Success," citing numerous authors' insights on success and failure. As Tom pointed out by quoting one author, "Success is not like a big net that drops over you one day, but something a person decides to do, then finds a way to make it happen." By the end of the day, NCPhA leaders were definitely

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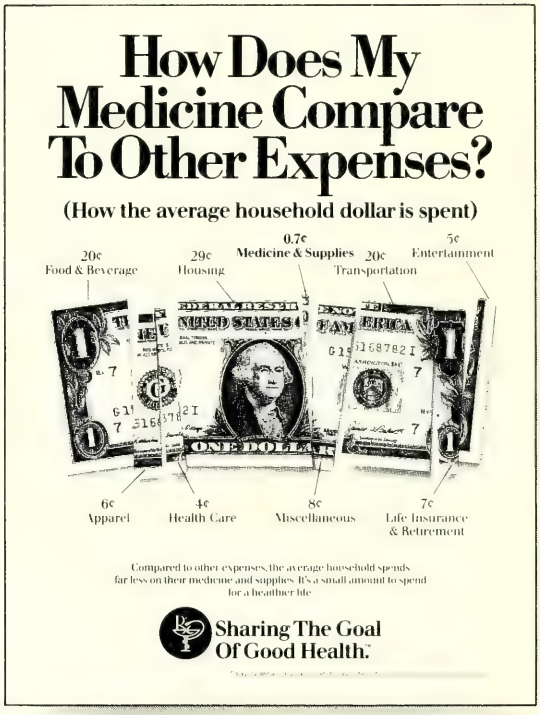
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REPORT OF THE WOMEN IN PHARMACY COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

The Women in Pharmacy committee met in Chapel Hill on November 23, 1987 with three members in attendance. Unfortunately, scheduling conflicts prevented us from meeting again as a group, and all other committee business to date has been conducted by mail or telephone.

Statistics from 1986 indicate that at least 31% of pharmacists practicing in N.C. are women. Furthermore, more than 65% of students at the UNC School of Pharmacy are female. Thus, we can expect that the proportion of women practicing pharmacy in N.C. will continue to increase, reaching 50% around the year 2000. Little has been done in North Carolina in recent years to assess the status and needs of pharmacists. Even less has been done to address the particular needs of women pharmacists. We often hear allegations that women pharmacists work fewer hours than their male counterparts, are more likely to work part-time, or to leave the field altogether to bear and raise children, and are less interested in and/or capable of seeking positions in management, government, and professional associations. The current shortage of pharmacists is even blamed, by some, on the increasing number of women in the field. However, we found little or no evidence to support these allegations.

We believe that it is time to reassess the status and needs of all pharmacists in N.C. and to determine what, if any, concerns need to be addressed specifically for women pharmacists. Thus, our primary goal this year was to conduct a survey of pharmacists in N.C. to determine whether or not the increasing number of women in pharmacy has or will significantly impact the profession, and in what ways.

For several years, the Women in Pharmacy committee has tried, unsuccessfully, to obtain funds to resurrect Dr. Jean Paul Gagnon's "NCPhA Employee Survey" and to update it to include questions regarding the particular concerns of women pharmacists. Funding was made available this year and questions proposed by previous Women in Pharmacy committees were added to the survey. We hope to learn from this survey: where women are working; how much they work; whether they have the same professional interests, opportunities, and committments as their male counterparts; what their needs and expectations regarding maternity leave, childcare, scheduling, and benefits are; and what major changes, if any, the profession should expect as a result of this increase in the number of women pharmacists.

The survey was conducted earlier this year and was still being analyzed at the time of this report. Our committee is anxiously awaiting the results of the survey and is enthusiastic about studying its conclusions. We plan to use the results of the survey as the basis for developing the goals and activities of the committee for the remainder of this year and for several years to come. We plan to meet this summer to discuss the survey results and to begin planning an agenda for 1989.

In addition to working toward completion of the NCPhA Employ Survey, the Women in Pharmacy committee was involved in three other projects.

First, the committee cosponsored, with Kappa Epsilon, the third annual Women in Pharmacy career forum. The forum was presented at the UNC School of Pharmacy on October 27, 1987 to a group of about 50 pharmacy and pre-pharmacy students. The panel was composed of women pharmacists from a variety of practice areas. These included a store owner, a veterinary pharmacist, an experimental drug studies coordinator, a clinical ambulatory care pharmacist, director of a relief pharmacists service, and an educator and researcher in higher education. The response to the program was overwhelmingly positive and we plan to repeat the program at least once next year.

A second project was that of sponsoring a speaker/program at the NCPhA convention. Michael Dorf, of Michael Sean and Associates in Washington, D.C., will speak on recent and pending legislative changes which influence the practice of pharmacy and the pharmaceutical industry. We hope that the program will be of interest to all pharmacists and will be well attended.

Finally, in an effort to support the participation of women in the annual convention, we arranged with Al Mebane to have child care services provided during the convention. We hope that these services will encourage women to attend and will become a regular aspect of the convention.

Kim Deloatch, *Chairman*
Leesa D. Furniss, *Vice Chairman*
Sonja Estes
Debbie Ladd
Rebecca Rowell
Joy W. Southerland

July, 1988

REPORT OF THE SOCIAL AND ECONOMIC RELATIONS COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

MINUTES
March 20, 1988

Members Present:	Members Absent:
Mack Erwin	Winston Burroughs
Al Mebane	Fred Eckel
W. H. Randall	Mike James
Bill Taylor, *Chairman*	Laura J. Vance

OLD MINUTES:

The minutes of our November 15, 1987 meeting were approved with the correction of Mr. Eckel's name, Topic I, Action I first sentence.

TOPIC I Mandatory Patient Counseling
Discussion: Patient counseling is a standard of care in N.C. and occurs through written and/or oral presentation of drug information to the patient or the patient's representative. This counseling is particularly important for the elderly or illiterate patient. It was felt that minimal standards should be developed and that an effort should be made to increase pharmacists activity in this area.
Action: A resolution will be presented before the convention.

TOPIC II Clinician Dispensing
Discussion: The association needs to develop an organized approach to assist the pharmacists in the state in dealing with this problem. It was emphasized that patients have a right to choose the pharmacy of their choice. There is a need for this committee, the association members and all pharmacists in the state to support the N.C. Board of Pharmacy in their current lawsuit which focuses on the problem of physician dispensing.
Action: A resolution will be presented before the convention.

TOPIC III Specialty Practice Recognition
Discussion: The committee again agreed that a need exists for recognition. The current bylaws state that three members can petition for the formation of an Academy. The following areas are to initially be considered: Ambulatory Care, Institutional Pharmacy, Educational/Administrative Pharmacy, Industrial Pharmacy, and Pharmacy Management. In addition an individual admitted to a specialty academy probably should maintain *X#* of hours of C.E. in the specific areas of specialty practice. This would in no way increase the hours of C.E. but rather focus a minimum number of hours of C.E. in the area of specialization.
Action: A resolution will be placed before the convention.

TOPIC IV Mail Order Prescriptions
Discussion: It was pointed out that mail order prescriptions potentially threaten the practice of pharmacy. Every effort should be made to address this problem.
Action: A resolution will be placed before the convention.

NEW BUSINESS:

I. Members of the Committee
Discussion: It was felt that more continuity for this committee could be developed by carrying over one or two members from year to year.
Action: It is recommended that greater continuity be developed.

II. Reactivation of North Carolina Pharmaceutical Speakers Bureau
Discussion: A speakers bureau may be helpful for the local associations and others in addressing many of the topics discussed by this committee.
Action: It is recommended that the Association reactivate its Speakers Bureau.

Respectively submitted,
William J. Taylor, *Pharm D.*

DRAFT RESOLUTIONS

I. PATIENT COUNSELING
Whereas it has been demonstrated that patient compliance with drug treatment can be improved through interaction with the pharmacist and whereas patients need and desire information regarding drug therapy and whereas pharmacists are recognized as the expert in drug therapy: **Therefore** be it resolved that patient counseling, where appropriate, be part of the standard of care in the delivery of pharmaceutical services and that all employers provide the resources, environment and time for patient counseling.

II. SUPPORT FOR NORTH CAROLINA BOARD OF PHARMACY
Through the efforts of the North Carolina Pharmaceutical Association Bill SB 784 was enacted regulating physician dispensing and whereas the North Carolina Board of Pharmacy adopted rules and regulations to protect public health and welfare consistent with the North

continued on page 10

COMMITTEE REPORT

Continued from page 9

Carolina Pharmacy Act: **therefore** be resolved in convention assembled the North Carolina Pharmaceutical Association does endorse the North Carolina Board of Pharmacy's rules and regulations governing physician dispensing and supports it in the suit: *Hall et al* vs. North Carolina Board of Pharmacy.

III. FREEDOM OF CHOICE

Whereas it is the patient's right to have a freedom of choice for the delivery of all health care services and whereas certain third party programs, clinicians and/or institutions may restrict the patient's choice regardless of convenience, quality or other priorities: **therefore** be it resolved that the North Carolina Pharmaceutical Association encourages the patient's right to choose their pharmacy for the delivery of pharmaceutical services.

IV. SPECIALTY RECOGNITION IN PHARMACY

Whereas the practice of pharmacy continues to increase in complexity and sophistication and whereas special interest groups should meet the needs of their constituency and whereas the constitution and bylaws of the North Carolina Pharmaceutical Association allow for the formation oif Academies in order to give focus, direction and recognition of specialization in pharmacy: **therefore** be it resolved that the convention assembled supports and encourages the formation of Academies in accordance with and as defined in Article IV of the North Carolina Pharmaceutical Association constitution and bylaws.

Bill Taylor, *Chairman*
Winston Burroughs
Fred M. Eckel
Mike James
Laura McLeod Vance
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REPORT OF THE ENDOWMENT FUND TRUSTEES/FINANCE COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

The Endowment Fund Trustees held the first annual fund raising dinner, October 17, 1987 at the Kenan Center in Chapel Hill. The event was well attended and enjoyed by everyone in attendance.

We received contributions in excess of $22,000.00. Twelve (12) pharmacists donated $1,000.00 each and were designated "Endowment Fund Members". All other pharmacists who made donations have been designated "Sustaining Endowment Fund Members" and when their total contributions equal $1,000.00 they will be designated as an "Endowment Fund Member" and will receive proper recognition.

Corporate gifts were received from Glaxo, Revco, DuPont Pharmaceuticals and Ciba-Geigy. Our speaker of the evening was sponsored by Glaxo Pharmaceuticals. We are sincerely grateful for support of the corporate community and our member pharmacists.

The Endowment Fund Trustees and Finance Committee held its regular meeting Friday, November 20, 1987 at the Institute of Pharmacy in Chapel Hill. The committee reviewed the fund accounts and made investment recommendations.

Mr. Mebane presented to the committee the proposed budget for the association for the 1988 fiscal year. After discussion and some revision the proposed budget was presented to the NCPhA Executive Committee for adoption.

The NCPhA Endowment Fund Trustees and Finance Committee met in the association office in Chapel Hill, Tuesday, March 10, 1988. The committee reviewed the annual audit report as presented by the associate auditor. The committee found the financial report as presented to be in proper order.

After discussion the Endowment Fund Trustees would like to thank each of you for your support during the past year and ask for your continual support. With your support we can make our association a stronger voice for pharmacy in our state and nation.

A copy of the Endowment Fund financial statement as of December 31, 1987 is attached for your information.

NCPhA ENDOWMENT FUND

FUND TITLE	JANUARY 1, 1987	DECEMBER 31, 1987
General Endowment Fund	113,006.80	143,188.67
Ralph R. Rogers Sr. Scholarship Fund	17,903.33	18,402.94
W. J. Smith Speaker Fund	7,087.26	7,095.01
J. S. Stewart Scholarship Fund	7,186.13	8,582.72
	$145,187.52	$177,269.34

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M. Keith Fearing, Jr.	Albert F. Lockamy, Jr.
Howard Ferguson	Albert P. Rachide
Robert B. Hall	Julian E. Upchurch

NCPHA WORKSHOP

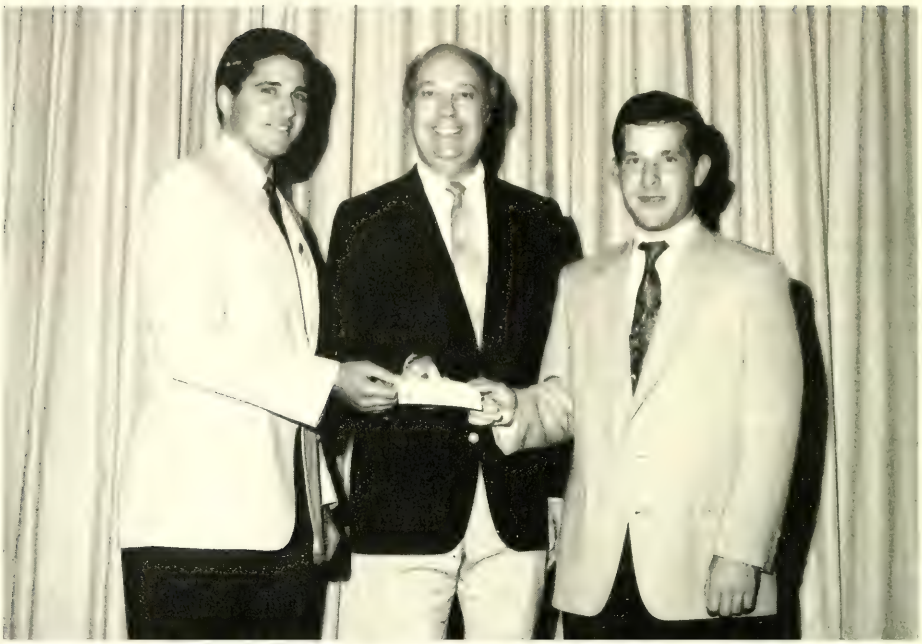
Continued from page 5

inspired to make NCPhA a state successful association this year and determined to make it happen!

Judging from the written comments received from those in attendance, everyone unanimously agreed that the first NCPhA Leadership Workshop was a great idea and a worthwhile experience that should be continued in the years to come!

John and Fred plan to present the NCPhA Leadership Workshop concept at the Southeastern Pharmacy Leaders Conference in August. If their idea is well received, the NCPhA Leadership Workshop could be used by other state pharmacy associations to help newly elected pharmacy officers become better prepared for their new positions.

The NCPhA Leadership Workshop was modeled after the Pharmacy Leadership Workshop which is sponsored each year by Marion Laboratories for newly elected state association presidents.



Treasurer, Gene Brown (right) and Joseph "Joe" Abdalla (left) present a $5,000 check to NCPhA President, Al Lockamy (center). (Staff photo.)

BETA XI CHAPTER OF KAPPA PSI PAYS OFF $5,000 NOTE TO NCPHA

June 10, 1988 marked another important milestone in the history of the Beta Xi Chapter of the Kappa Psi Fraternity at UNC-Chapel Hill. On this day, officers of the Beta Xi Chapter paid in full a $5,000.00 note. The note was obtained from NCPhA in 1969 as part of fundraising efforts to raise money to build the Kappa Psi house at 208 Finley.

A total of $140,000 was originally borrowed to build the house which is equivalent to approximately $500,000 today! To date, $110,000 of the mortgage has been paid. In 1985, $100,000 was paid to Central Carolina Bank and a $5,000 bond was paid to the Pharmacy Foundation last fall. Twenty-five thousand dollars worth of bonds remain outstanding, $10,000 of which are still owed to the Pharmacy Foundation. The remaining monies are due in November of 1989.

The Beta Xi Chapter of Kappa Psi was first established on the UNC campus at Chapel Hill in 1915. Since that time the membership has grown to a total of sixty brothers. Approximately half of the fraternity members live in the chapter house.

Chapter officers for 1988-89 are: Joseph Abdalla, Regent; Joey Pippin, First Vice-Regent; Clayton Brooks, Second Vice-Regent; Gene Brown, Treasurer; Greg Morris, Secretary; and David Agner, Chaplin.

We'd like to hear from you . . .

If you have any suggestions for articles, news about professional activities, announcements or other newsworthy information or ideas for the journal, give us a call on our toll free (in-state) hotline at 1-800-852-7343, M-F, 8:30 A.M. - 5:30 P.M. or mail to *Carolina Journal of Pharmacy*, Attention: Managing Editor, P.O. Box 151, Chapel Hill, NC 27514.

We are here to serve you!

LOCAL NEWS

WORK RECEIVES FDA COMMISSIONER'S SPECIAL CITATION AWARD

David R. Work of Carrboro, executive director of the N.C. Board of Pharmacy, has received the Commissioner's Special Citation as a member of the Model Veterinary Drug Code Working Group. The award, which came from the Food and Drug Administration, was made in recognition of his outstanding contribution in developing the Model Veterinary Drug Code that was approved by the Association of Food and Drug officials.

Provisions of the Model Veterinary Drug Code were developed for the purpose of assuring the proper distribution of veterinary drugs to prevent adulteration of the food supply with illegal drug residues through misuse of drugs on food producing animals and to promote the health of treated animals. The code provides for the registration of distributors of veterinary drugs by a system of permits, the inspection of the establishments of such distributors, and requires records on prescription veterinary drug distribution.

State governments across the nation will be encouraged to adopt the new "model" code. The code has not yet been considered by the North Carolina General Assembly.

ECKEL HONORED AS FELLOW OF ASHP

North Carolina pharmacist, Fred M. Eckel, M.S. is one of the first sixteen pharmacists named as a Fellow of the American Society of Hospital Pharmacists (FASHP). The new fellows were chosen by the Society's Commission on Credentialing from among the applicants to the American Society of Hospital Pharmacists Practitioner Recognition Program. The purpose of the program, first introduced in mid-1987, is to recognize excellence in pharmacy practice and to promote public awareness of pharmacists who have distinguished themselves in their professional careers. The new fellows received recognition plaques on June 8, 1988 during the American Society of Hospital Pharmacists Annual Meeting in San Francisco, California.

Mr. Eckel is Professor and Chairman, Division of Pharmacy Practice at UNC-CH and Associate Director of Pharmacy at N.C. Memorial Hospital, Chapel Hill. He has been active in both national and state pharmacy organizations. Among his many elected positions and honors include Director of the American Foundation for Pharmaceutical Education since 1979, ASHP President 1975-76, NCSHP President — 1981, NCSHP Hospital Pharmacist of the Year — 1973, and the Dean's Decennial Creative Leadership Award from the UNC School of Pharmacy — 1987.

WEDDINGS

Miss Susan Kelly Mouzon and ALTON RAY DAVIS, JR. were married Saturday, April 9 at the Oakmont Baptist Church in Greenville, N.C., at a double-ring ceremony.

The bride is a graduate of the East Carolina University of Nursing and is employed as a Registered Nurse at Pitt County Memorial Hospital. The bridegroom is a graduate of the University of North Carolina at Chapel Hill School of Pharmacy Class of 1985 and is a Registered Pharmacist at Pitt County Memorial Hospital. The couple make their home in Greenville.

KRISTA DAWN RAYFIELD of Bessemer City and James Craig DeBrew of Sumter, S.C. were married Saturday, April 9 in the Second Baptist Church in Cherryville, N.C. The bride's father, Rev. Hinkle A. Rayfield, Jr. assisted by the Rev. Keith Love heard the couple pledge their double ring vows.

The bride received a B.S. degree from the School of Pharmacy University of North Carolina at Chapel Hill in 1987. She is employed as a pharmacist by Eckerd Drug in Gastonia. The bridegroom graduated in 1985 from North Carolina State University. He is employed by Carolina Power & Light Co. as a Marketing Representative. The couple will live in Sumter, S.C.

JENNY LYNN STRICKLAND of Clinton and Lester Edward Williamson III of Virginia Beach, VA were married February 6, 1988 at Hickory Grove Baptist Church.

The bride, a graduate of the University of North Carolina at Chapel Hill School of Pharmacy Class of 1982, is a registered pharmacist at Chesapeake General Hospital. The bridegroom, a graduate of Southeastern Seminary, is minister of Youth and Education at Kings Grant Baptist Church. The couple reside in Virginia Beach.

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duodenal ulcer therapy available in a

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DICKINSON'S PHARMACY

by Jim Dickinson

A season for renewal. You have to marvel at the amazing resiliency of our Republic, and its self-healing powers.

Just as all the news seems to be getting worse and worse, we seem to turn a corner, almost without noticing it, and some things that have been bothering us start getting repairs, and even improvements.

Oddly, a lot of this renewal seems to coincide with the presidential political seasons.

Every presidential election that comes along is — if you avert your attention from the candidates' frenzied glibness — accompanied at the grassroots by work that's apparently coincidental, and largely unnoticed, on formerly ignored problems.

Take some of pharmacy's problems, for example. Just as some of them seem to be worse than ever (dispensing physicians, mail-order), others seem to be undergoing cyclical repair in this political season (curriculum changes in the schools, legal decisions bearing on liability, freedom-of-choice reforms, fiscal incentives for pharmacists).

The liability issue is most instructive, because the law moves slowly and deliberately enough to be studied.

Pharmacists who have worried about recent legal decisions requiring them to counsel patients and to second-guess prescribers will be heartened by the recent reversal of one of those decisions (*Leesley v. West*, in Illinois). They will be even more heartened to know that this reversal is in line with a trend in other recent cases which, in the view of such pharmacy law experts as West Virginia University's David B. Brushwood, recede from new liability burdens.

The *Leesley* case, it may be remembered, involved damages for severe gastrointestinal bleeding due to a prioxicam (Feldene) in the absence of counseling by the pharmacist. The lower court faulted the pharmacist for not routinely dispensing the package insert.

The appeals court disagreed, ruling that (a) it would be an unreasonable burden on pharmacists and on manufacturers to require the dissemination of package inserts with every R, and (b) it is state policy not to expand the liability risks of health professionals.

This position, to some extent mirrored in a recent California State Supreme Court decision easing the tort liability of pharmaceutical manufacturers and a District Superior Court decision discrediting the use of so-called "expert witnesses" who testify against health professionals for pay, has been 12 years in coming.

That is three presidential elections, for those whose memories do not reach back to the start of the current hyper-anxiety in pharmacy about liability.

If you step back from such admittedly important pharmacy minutia as dispensing decisions, precise legal points, exact reimbursement amounts, and specific subjects taught in school, you see patterns and cycles in many of the things that impact the profession.

One is that the end of the Nixon-Ford era, a new era for activism began (first for liberals and next, for ultra-conservatives), in which pharmacy was subjected to escalating cost-containment and legal liability ideas.

It wasn't alone, of course, all health professionals felt the same assaults at different times. The social conscience being expressed in this era that's now ending was probably this: Professionals who impact the most intimate conditions of the public at large have not been properly accountable, either in the way they do their work or in the way they charge for their services.

In suffering that assault under a variety of blunt legislative, regulatory and judicial instruments, those being wounded managed to make a few points, while adjusting their practices.

The first of these was the point that the work of saving money for programs is something that itself costs money, and should be paid for. Jimmy Carter's Federal Trade Commission eventually recognized this, and drafted a model substitution law that paved the way for today's imperfect "generic incentive" reimbursement mechanisms.

The other suffering that pharmacy did during the past 12 years got other points across, too. Among these was the idea that pharmacists know more about drugs than physicians do; this has been accepted in mandatory counseling laws in some states and, potentially, in the draft Medicare drug benefit bill, nationally.

And on the liability front, Professor Brushwood sees a see-sawing of legal principles during that period. Courts tested the old pharmacy excuse that dispensing carries with it no responsibilities to the patient or the prescriber,

continued on page 27

Above: The ladies warm up for the Woman's Auxiliary Walk-a-Thon. Walkers raised $1,602.75! Pictured here, from left, Sarah Ann Sasser, Ailene Whaley, Erie Cocolas, Kay Rhoades, and Joyce Sanders. Below: Walk-a-Thon Medalist Winners, from left, Betsy Mebane, Gold Medal; Erie Cocolas, Silver Medal; and Sarah Ann Sasser, Bronze Medal. The medals were presented by Walk-a-Thon coordinator, Mary Lou Worley (at the podium) and 1987-88 Woman's Auxiliary President, Mary Lou Davis. (Photos by Colorcraft).

HIGHLIGHTS OF THE 1988 WOMAN'S AUXILIARY CONVENTION ASHEVILLE, NORTH CAROLINA

The 61st Annual Convention of the Woman's Auxiliary of the North Carolina Pharmaceutical Association met in Asheville, May 18-21 at the Grove Park Inn. It was truly a lovely time of year to enjoy the fresh air and the beautiful view of the mountains from the historic Inn.

Phillip and Sandra Crouch and Richard Hoffman, Convention Chairmen, did an outstanding job in planning an exciting and refreshing convention, and we thank you so much for your many hours of planning.

The Woman's Auxiliary Hospitality Room was always busy with many friends coming and going and enjoying the delicious snacks which the Asheville ladies had prepared for us. Beulah Mallard and Inez Rock did a superb job in planning for the Hospitality Room. All the Asheville ladies were so wonderful to us and made us feel so welcome.

Many thanks to Mary Lou Worley, Chairman of the Ways and Means Committee, and the members of her Committee . . . Levita Brinson, Sarah Ann Sasser, Loretta Woodard, Ann Woodard, and Carolyn O'Quinn . . . who so ably assisted her in planning one of our most successful fund-raising campaigns. Through their efforts, we were able to raise $1,930.75 at the convention. The Walk-a-Thon was probably our most successful fund-raiser ever. Not only was it healthful for everyone who walked, it was also a "fun" raiser; and through our walkers and our generous contributors, we were able to raise $1,602.75. Congratulations to our three medal winners:

GOLD — Betsy Mebane, Chapel Hill
SILVER — Erie Cocolas, Chapel Hill
BRONZE — Sarah Ann Sasser, Smithfield

A special thanks to Kendall Drug Company who donated 50 T-shirts commemorating the Woman's Auxiliary of the NCPhA Walk-a-Thon, May 19, 1988, Asheville, NC, for those who participated. Through the sale of Coat-of-Arms Cross-Stitch Kits, note cards, and cook books, we were able to raise another $328.00 for our auxiliary. Thanks to all who so generously contributed and who made purchases.

Wednesday, our first convention day, was a hustle and bustle of getting registered and moved into our rooms. Auxiliary members were delighted with the "goody" bags they received at the registration desk. Our thanks to Dr. T.C. Smith Co., Inc. for providing these for us.

Woman's Auxiliary activities got into full swing early Thursday morning with the 7:00 a.m. Walk-a-Thon. It was back to the Inn for a quick shower and change of clothes, a visit to the Hospitality Room, and back downstairs (or maybe it was upstairs for some of us) to board the busses at 9:30 a.m. for a Tour of the Biltmore House. Following the tour we enjoyed a restful, delightful buffet luncheon at the Deerpark Restaurant and an afternoon tour of the Winery. Our thanks to Burroughs Wellcome Company for partly sponsoring the luncheon and to Roerig and Sandoz for the table favors.

Tired yet? No, there wasn't time to be tired for there was a wonderful dance to attend Thursday night. Conventioneers spent a delightful evening dancing the hours away to the music of the Asheville-based Paul Nichols' Orchestra. We are grateful to the T.M.A. for this beautiful, fun-filled evening. As usual, it was one of the highlights of the entire convention. Thank you, T.M.A.!!

The Woman's Auxiliary's 61st Annual Business Session began at 9:30 a.m. with 54 of our members attending. Leveita Brinson gave the invocation and Sandra Crouch, Convention Chairman extended a welcome to Asheville and the convention. Julian Upchurch, President of the NCPhA and Douglas Sanders, President of the T.M.A. brought greetings to us from their respective organizations. Betty Jane Upchurch presented the Rite of Roses for our deceased members, Mrs. Frances Fordham of Greensboro, and Mrs. Nina E. Bryan of Asheville, who died during the past year. Committee reports were given by committee chairmen. I am happy to report that during the year $500 was given to MISSION AIR, our State Service Project, and that the VIAL OF LIFE (VOL) Service Project is as strong as ever, continuing to receive requests from all over the state for the VOL slide presentation and supplies. Also, I am happy to report that the redecorating project of the ladies powder room and kitchen at the Institute is now completed. We are grateful to the many wholesalers, pharmacists, companies and individuals for the numerous and fantastic door prizes which they donated and were awarded at the close of the business session. Also, we greatly appreciate the capable assistance of the two lovely young ladies who served as our Pages, Lee

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GEER

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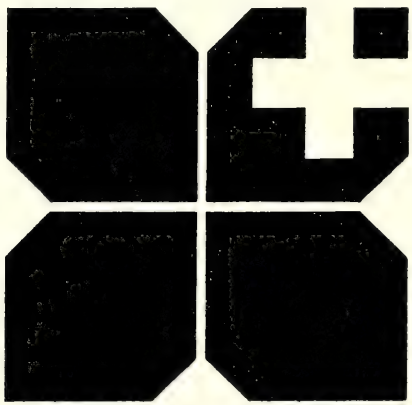

CHARLESTON, S.C.
GREENVILLE, S.C.

WOMAN'S AUXILIARY

Continued from page 17

Ann Donnelly and Kathryn Mull.

At 12:00 noon we again boarded busses and were off to the beautiful Country Club of Asheville where we enjoyed a breath-taking view of the mountains from the terrace where we also enjoyed a refreshing glass of wine, compliments of McKesson Drug Company. Then we moved inside to the beautiful dining room were we enjoyed a delicious luncheon sponsored by Glaxo. The delectable salad plates even contained an eatable Pansy. During the luncheon we enjoyed the beautiful piano music of Jeff Collins while watching a fashion show by Great Expectations directed by Susan Drenning. Our thanks to Dr. T.C. Smith Smith Company, W.H. King Drug and Carolina Surgical Supply for the *Mountain Elegance* cookbooks which everyone received. Following the luncheon all Past Presidents in attendance were recognized as well as Registered Pharmacists. Lorene Dover of Asheville presented a tribute to Iva Lee Jarrett, age 93, of Asheville who was the first president of the State Auxiliary when it was recognized in 1934 after having been inactive since 1926. In recognition of outstanding service to the Woman's Auxiliary, Betsy Mebane of Chapel Hill was awarded a Life Membership in the Auxiliary. The touching presentation was made by Erie Cocolas of Chapel Hill. Congratulations to Betsy for this much-deserved honor. Lib Fearing of Manteo gave a meaningful "You Are Special" Installation of Officers for 1988-89. The president's gavel then changed hands to Rose Boyd of Kenley, our new President. We can look forward to another exciting year for the Auxiliary under her capable leadership. My thanks to each of you for the beautiful silver tray which was presented to me in recognition of my term as your president.

As you can see, it was a great, memorable convention! I thank everyone who had a part in making it such. Start making your plans now to attend next year's convention at the Myrtle Beach Hilton, Myrtle Beach, SC, May 18-21.

Thanks to my Executive Board for all their support, inspiration and love and to all the hard-working committees who did a tremendous job at their appointed ttasks. A special tanks to Al and Betsy Mebane, Erie Cocolas and Mary Lawler for their love, cheerfulness, wisdom and guidance which they shared with me.

Thank you for the honor of serving as your President for 1987-88 and for nourishing me to "bloom where I was planted" and for your "Pride in Pharmacy". God bless you everyone!

Love to all,
Mary Lou Davis

WOMAN'S AUXILIARY SCHOLARSHIP FUNDS, SERVICE PROJECTS AND DONATIONS 1987-88

Vivian Smith Scholarship Fund	1,200.00
Lucile Rogers Scholarship Fund	1,600.00
W.J. and Vivian Smith Scholarship Fund	1,200.00
Consolidated Pharmacy Loan Fund	500.00
Institute of Pharmacy Redecoration (Woman's Bathroom)	5,000.00
Mission Air	500.00
	$10,000.00

SPECIAL HONOR AWARDED TO BETSY MEBANE

Betsy Mebane was honored recently with a life membership in the Woman's Auxiliary to the North Carolina Pharmaceutical Association. It was the first time the Executive Committee of the Auxiliary has awarded a life membership in several years.

It means that the recipient has contributed outstanding service, far beyond the call of duty. Betsy has been an active member on the state and local levels for more than 31 years. She has served as the First Vice-President, Parliamentarian, and Treasurer for the Auxiliary at the state level and as Co-President of the Chapel Hill Auxiliary for 2 years. When Betsy and husband, Al Mebane, lived in Greensboro, she also served as President of the Greensboro Auxiliary.

Betsy is the state coordinator for the Woman's Auxiliary and combines this responsibility with her duties as an administrative assistant for the North Carolina Pharmaceutical Association at the Institute of Pharmacy in Chapel Hill.

N·A·R·D 90th Annual Convention & Trade Exposition
October 9-13, 1988 • Atlanta, Georgia

NC

Convention Registration

1. Please type or print all information.

2. Complete this form and return it with your check or charge authorization for the correct amount to NARD.

3. Your name and pharmacy/company will appear on meeting badge as indicated at right.

NOTE:

This form cannot be processed unless all information is provided.

If cancellation is necessary, you will receive a full refund of your convention registration fee, minus a $20 processing fee. All requests for refund must be in writing.

Questions—Call 1-800-544-7447

Membership Number_____ Exp. Date_____
Name_____
Pharmacy/Company Name_____
Address_____
City_____ State_____ Zip_____
Phone_____
Nickname for Badge_____
Spouse/Guest Badge_____
Nickname for Badge_____

Please check if applicable: ☐ First Convention ☐ New Member since Nov. 1987

FEES: (check appropriate box)	Before 8/15	8/15 to 9/19	9/20 to On-Site
☐ Active Member	$150	$170	$220
☐ Pharmacist Member	$150	$170	$220
☐ Corporate Member	$150	$170	$220
☐ Spouse/Guest	$ 65	$ 75	$ 95
☐ Nonmember	$240*	$260*	$310*
☐ Non-Exhibiting Company Representative	$500	$500	$500

*$90 can be applied to new membership. Check here if you want to join NARD. ☐
Are you a Store Owner? ☐ Yes ☐ No

Daily registration fee: Members $75.00, Nonmembers $100.00;
($25.00 can be applied to new membership).

PAYMENT: (check appropriate box)

☐ Check Enclosed ☐ MasterCard ☐ VISA ☐ American Express

Amount $_____
Account Number_____ Exp. Date_____
Signature_____

Housing Reservation

1. NARD will handle all reservation requests. Hotel will not accept phone reservations.

2. Room confirmation will be forwarded by the Hyatt Regency Atlanta or Westin Peachtree Plaza to the address below. The Hyatt Regency will serve as the headquarters hotel—the majority of the meetings will be held at the Georgia World Congress Center.

3. You will receive confirmation of your reservation directly from the hotel. Changes in arrival/departure dates, accommodations, and cancellations may be made with the hotel after you receive confirmation.

4. Suites are available. For rates, contact NARD at (703) 683-8200.

Note:

Reservations received after September 7 will be confirmed on a space available basis.

Name_____
Type of Accommodation _____ Number of People_____
Arrival Date_____ Departure Date_____
Sharing Room With _____

Please indicate first and second choice of hotel and rate. Rates do not include applicable tax.

____ Hyatt Regency Atlanta

Single $ 88 __ $ 95 __ $102 __
Double $102 __ $109 __ $119 __

____ Westin Peachtree Plaza

Single $ 95 __ $105 __ $115 __
Double $105 __ $115 __ $125 __

(NOTE: If your choice of rate is not available, the next rate will be assigned.)

Send Confirmation To:

Name_____
Pharmacy/Company Name_____
Address _____
City_____ State_____ Zip_____

If there are any questions regarding your hotel reservation, the hotel or NARD may contact you at:
Telephone Number (_____)_____

Check-in time is 3 p.m., check-out is 12:00 noon. All reservations are held until 6:00 p.m. Please check hotel confirmation carefully for details on guaranteeing your reservation (Hyatt and Westin have different policies).

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Contributions and gifts to NARD are not deductible as charitable contributions for federal tax purposes. Dues payments are deductible by members as an ordinary and necessary business expense.

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- Continuing education credit—up to 21 contact hours.
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- Delightful social events with your colleagues, plus special family entertainment featuring TONY BENNETT and GEORGE KIRBY.
- NARD's 300-*plus* booth exposition.
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NARD 1988 WORKSHOPS

"Merchandising PUNCH For Your Front End Products"

"The Pharmacist's Role in Emergency Medicine"

"The Cutting Edge of Inventory Efficiencies: POS Technology"

"Managing Medication Compliance in the Elderly"

"Keep More of What You Earn: Proven Financial Analysis Strategies"

"Removing the Barriers to Effective Patient Counseling"

"Secrets of Pricing Pharmaceuticals for a Competitive Edge and Bottom-Line Results"

"The Physician Factor: Detailing Tactics That Boost Prescription Traffic"

"Past and Present Methods of Hair Replacement"

"Dollars and Sense: New Concepts in GI Patient Care"

"Lower Respiratory Infections in the Smoker and Otitis Media"

"Building on Success: How to Open Your Second Pharmacy"

"Alzheimer's Disease: Pathophysiology, Treatment, and Patient Management"

"Keys-to-Success V: Build Your Employees' Sales Effectiveness"

"Serving the Needs of AIDS Patients with Sensitivity and Professionalism: A Practical Approach"

"Making Sick Businesses Well with Microcomputer Spreadsheet Templates"

SYMPOSIA

"How to Finance Your First Pharmacy"

"National SAFE KIDS Campaign"

"How to Promote Your Professional Pharmacy Services"

"The Impaired Professional Colleague"

"Expanding Roles for Pharmacists Under Medicare"

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Colleagues in Consultation—Your opportunity to share, one on one, the insights and successes of your colleagues in the subject area you choose.

NARD Town Hall Meeting:—"Pharmacy Technicians"

The NAPPAC Reception—Support the National Association of Pharmacists' Political Action Committee—the only political action committee dedicated to serving independent retail pharmacy's interests in the nation's capital.

For more information, call NARD toll-free at 1-800-544-7447 between 1:00 and 5:00 p.m. Eastern time.

Women's Auxiliary 1988-89 Officers: From left, Rose Boyd, President; Mary Good, Past President; Frances Jones, 2nd Vice President; Jean Morse, Past President; Mary Lou Worley, Corresponding Secretary; Eloise Watts, Treasurer; Susan Maddox, Historian; Velma Brown; Jewell Oxendine, Advisor; Mary Lou Davis, Advisor; and Betsy Mebane, State Coordinator. Not present: Dollie Corwin, 1st Vice President; Suzanne Bizzell, Recording Secretary; and Rebecca Work, Parliamentarian. (Photo by Colorcraft).

Outgoing President, Mary Lou Davis (left) handing over the president's gavel to incoming president, Rose Boyd. (Photo by Colorcraft).

WOMAN'S AUXILIARY, NCPhA
1988-89
OFFICERS

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Dollie Corwin, Charlotte — *Hospitality*

Frances Jones, Oxford - *Membership*

Mary Lou Worley, Princeton — *Publicity*

Carolyn O'Quinn, Durham — *Ways & Means*

Vivia Creech, Smithfield — *Nominations*

Erie Cocolas, Chapel Hill — *Publications*

Mary Good, Morehead City — *Resolutions*

Ruby Creech, Smithfield — *Necrology*

Jerry White, Beaufort — *Vial of Life*

Kay Rhoades, Southern Pines — *Mission Air*

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P.O. Box 5, Kenly, NC 27542

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6642 Summerlin Place, Charlotte, NC 28211

2nd Vice President — Mrs. Charles F. Jones, Jr. (Frances)
302 Main Street, Oxford, NC 27565

Recording Secretary — Mrs. Robert Bizzell (Suzanne)
1007 Rhem Street, Kinston, NC 28501

Corresponding Secretary — Mrs. Robert Worley (Mary Lou)
Route 2, Box 17, Princeton, NC 27569

Treasurer — Mrs. Jack G. Watts (Eloise)
444 Tarleton Avenue, Burlington, NC 27215

Historian — Mrs. Ronald W. Maddox (Susan)
415 Keith Hills Road, Lillington, NC 27546

Parliamentarian — Mrs. David R. Work (Rebecca)
130 Gristmill Lane, Chapel Hill, NC 27514

Advisor — Mrs. Jesse Oxendine (Jewell)
1812 Woodberry Road, Charlotte, NC 28212

Advisor — Mrs. Leslie H. Davis (Mary Lou)
5444 Marengo Circle, Charlotte, NC 28216

State Coordinator — Mrs. A.H. Mebane, III (Betsy)
534 Dogwood Drive, Chapel Hill, NC 27514

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C. RUSH (Rusty) HAMRICK, 1 yr.
Kendall Drug Co.

74th ANNUAL MEETING OF T.M.A. THE GROVE PARK INN — ASHEVILLE, N.C. MAY 19, 1988

The meeting was called to order by President Doug Sanders.

The invocation was given by Canie B. Smith. The Rite of Roses was presented by Rusty Hamrick and Zack Lyon. It was a very impressive ceremony in memory of the following:

W.P. Brewer, Sr.	Justice Drug Co.
Carl Geanes	Scott Drug Co.
D. Lawrence Smith	Ayerst Labs
Doug Finch	W.H. King Drug

From the Woman's Auxiliary, President Mary Lou Davis gave a very interesting talk to the T.M.A. thanking them for all the good things they are doing — golf, tennis, dance, and loan fund. She congratulated one and all T.M.A. members and asked us to continue to give our support to the convention.

A motion was made by Tom Sanders, and seconded by Canie Smith that the reading of the minutes be omitted since they were read and approved at the Board Meeting. The motion passed.

The treasurer's report was given as follows:

Total expenses for the year —	$3,892.13
Savings	3,189.35
Note	2,500.00
Checking	1,880.92
Total	7,570.27
Minus — 1 check not cleared	29.40
BALANCE	$7,540.87

The Audit Report was given by Frank Fife and Zack Lyon. Mr. Fife reported that the books were in order as reported. A motion was made by Dick Hoffman and seconded by Bobby McDaniels that the Treasurer's report be accepted and presented. The motion passed.

OLD BUSINESS

The roster publication of 1987 was discussed. All seemed to think that the 1988 roster should be printed like the 1987 card.

NEW BUSINESS

Golf report — Jr. Little reported 66 had signed up to play golf.

Rusty Hamrick and Roy Moss gave the report from the Nominating Committee. Rusty Hamrick nominated the following slate of officers and directors:

OFFICERS:

President	Tom Terry, III (Owens Minor)
1st Vice President	Rudy Snow (Mayrand, Inc.)
2nd Vice President	Dick Hoffman (Dr. T.C. Smith Co.)
Sec. Treasurer	L.M. McCombs (Lilly-Retired)

BOARD OF DIRECTORS

5 years..... Doug Sanders
W.H. King Drug

4 years..... John T. Black, (Emeritus)
Colorcraft Corp

3 years..... Zack Lyon, (Retired)
W.H. King Drug

2 years..... Roy M. Moss, CMR
A.H. Robins Co.

1 year ..... C. Rush (Rusty) Hamrick
Kendall Drug

The motion was seconded by Zack Lyon, and passed.

The officers were installed by Zack Lyon. The shortest installation in history!

Doug Sanders thanked everyone for their help during his tenure in office.

New President, Tom Terry, III presented the outgoing President Doug Sanders with a president's plaque.

President Tom Terry thanked everyone for electing him president of T.M.A. He asked for their continued help during the coming year.

There being no further business, the meeting adjourned.

L.M. McCombs
Secretary Treasurer
5/19/88

MEETING OF THE T.M.A. BOARD OF GOVERNORS AND OFFICERS

The meeting was called to order by President Doug Sanders.

The invocation was given by L.M. McCombs.

The minutes of the last Annual Meeting were presented to each member present. After all had read the minutes, a motion was made by Tom Sanders that the minutes be accepted as presented. It was seconded by Tom Terry, and the motion passed.

The Treasurer's report was given.

A motion was made by Tom Terry, and seconded by Tom Sanders that the report be accepted as presented. The motion passed.

The following were presented by L.M. McCombs for Life Membership:

Tom Sanders, W.H. King Drug

James A. Wolfe, Kendall Drug

Edgar L. Thompson, Dorsey-Sandoz Labs

James R. (Bob) Case, Stanback Co., LTD

A motion was made by Bobby McDaniels, and seconded by Rusty Hamrick that these be accepted. The motion passed.

OLD BUSINESS

The roster publication was discussed and all agreed to publsih the same type as last year.

NEW BUSINESS

A discussion was held on the amount of money in the Treasury. A motion was made by Frank Fife, and seconded by Tom Terry, III, that we transfer $1,000.00 from savings to T.M.A. Foundation Fund. The motion passed.

The Nominating Committee report was given by Rusty Hamrick.

A motion was made by Tom Sanders, and seconded by Roy Moss that the nominations be accepted. The motion passed.

There being no further business, the meeting was adjourned.

L.M. McCombs

ANNUAL MEETING OF THE T.M.A. FOUNDATION FUND, BOARD OF DIRECTORS AND OFFICERS

Presiding: Tom Sanders, Chairman
Present: Moss, Terry, D. Sanders, McDaniel, Rusty Hamrick, Fife, McCombs.

A copy of the minutes were given to all present. After reading, they were approved as presented.

Treasurer Report — the only report available was the amount of money in United Federal of Cary. This was turned over to L.M. McCombs by Treasurer, Steve Collins, who resigned after being transferred to Texas. The amount available is $1,727.74. The rest of the report was delayed until more information could be obtained. The remainder of the money is in CCB in Durham, in a C.D. Note (C.D. note — $15,535.87)

Note	$14,553.87
Interest	1,001.38
	$15,535.25

Chapel Hill Loan Fund: the T.M.A. Foundation Fund has sent $11,700.00 to Al Mebane to date (5/19/88).

The total amount of money raised by the T.M.A. Foundation to date (5/19/88) is $29,062.99.

The following were submitted as Board of

continued on page 26

CONVENTION

Continued from page 25

Directors and Officers. A motion was made by McCombs, and seconded by Rusty Hamrick that they be accepted. The motion passed.

DIRECTORS

1 year
- Zack Lyon
- Tom Terry, III
- Bobby McDaniels
- Roy Moss

2 years
- Rush Hamrick, Jr.
- Tom Sanders
- Horace Lewis
- Doug Sanders

3 years
- Bill Amdrews
- Frank Fife
- Len Phillipps
- Ralph Rogers, Jr.

OFFICERS

Chairman ..... Tom Sanders
Sec.-Treas. ..... Rush Hamrick, Jr.
Asst. Sec.-Treas. ..... L.M. McCombs

After much discussion of the Directors and Officers, they agreed to send the following amount of money to Chapel Hill and Campbell College for the Loan Fund.

Chapel Hill $1,500.00
Campbell College $1,000.00

This makes a total of $14,200.00 that has been appropriated and made available for loans. A motion was made by Rusty Hamrick and seconded by Tom Terry III that the above be accepted, and the motion passed.

It was agreed that some of the old papers and records of the Foundation Fund be turned over to Tom Sanders to be placed in a large safe that he has at his home. (5/19/88)

There being no further business, the meeting adjourned.

L.M. McCombs

The following made donations to T.M.A. Foundation Fund:

L.M. McCombs	$20.00
Doug Sanders	$20.00
Tom Terry, III	$20.00
Bobby McDaniels	$20.00
Rusty Hamrick	$20.00

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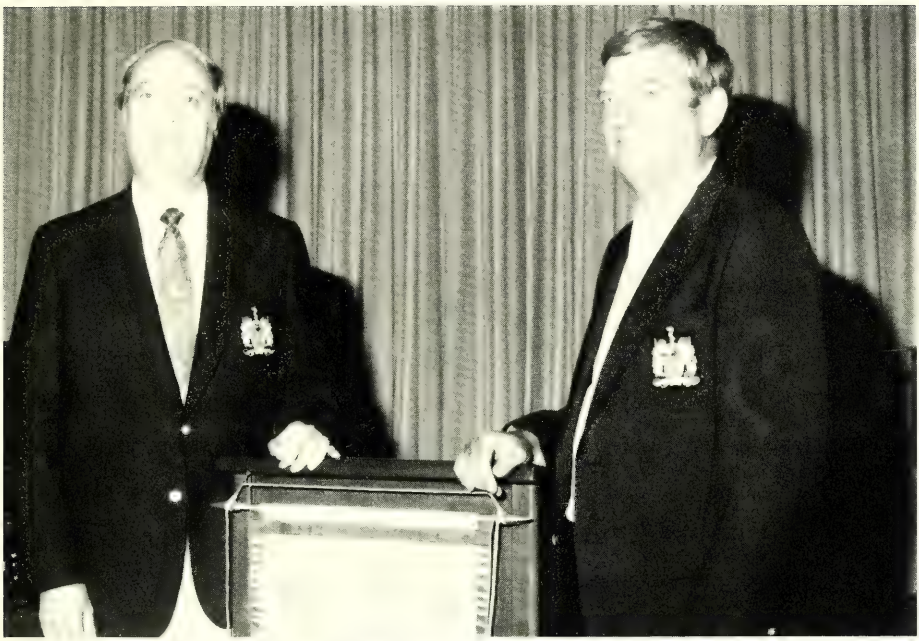

President Al Lockamy (left) and Past President Julian Upchurch model their new NCPhA blazers, complete with Association Coat of Arms as the blazer crest. The blazers are an annual gift from Burroughs Wellcome Co. to the incoming president of the NCPhA. (Not pictured is Past President Keith Fearing who was unable to attend the blazer presentation.) Staff Photo.

DICKINSON'S PHARMACY

Continued from page 15

and found it not credible. Then, says Brushwood, they tested the idea that pharmacists have an enforceable duty to second-guess every prescription; recently, that too seems to have been found not credible.

It's too soon to say what trends and patterns will form out of the current political season — or how long any of them will last. Just because we can look back in retrospect and see certain gains in pharmacy within the framework of a 12-year political era does not necessarily mean that another 12-year era is beginning.

But in this political season, while our attention may be distracted by personalities and rhetoric, it should be helpful to consider the evidence that this is also a time when real problems tend to get sorted out — even if they aren't fixed with a satisfying click.

At first glance it might not look like it, but away from the television cameras this is the season for renewal.

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsibility for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

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CORRESPONDENCE COURSE
Advising Consumers on OTC Products for Prickly Heat and Diaper Rash

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University, Ada Ohio

and

J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati
Cincinnati, Ohio

Goals

The goals of this lesson are to:

1. disucss the proposed causes and major prophylactic means for avoiding prickly heat and diaper rash;
2. present current thought on the medical management of these two disorders.

Objectives

At the conclusion of this lesson, the successful participant will be able to:

1. identify the various types of prickly heat and explain their differences;
2. suggest how to best prevent and treat prickly heat;
3. compare and contrast the theories on causes of diaper rash;
4. suggest how to best prevent and treat diaper rash.

Rash commonly occurs as the result of excessive heating or occluding of the skin, or from leaving urine or feces-soiled diapers on infants or small children for extended periods. Diaper rash appears in adults and infirm patients who are incontinent and/or confined to bed. Prickly heat rash may also appear at any age during any season.

Pharmacists are often asked to recommend OTC products to treat both afflictions. Consumers also want to know what causes them and how to prevent them. Unfortunately, there is confusion between the two disorders regarding their causes, prevention, and treatment.

This month's lesson defines prickly heat and diaper rash. It provides the physiological basis for development of each disorder, and presents current guidelines for preventing and treating them. Pharmacists will also learn specific points of consumer advice to pass along.

Prickly Heat

Lesions of prickly heat (miliaria, heat rash) were described nearly 2000 years ago. Amelius Cornelius Celsus (25 B.C. to 50 A.D.) discussed pustules caused by sweating in *De Medicina*, and Pliny the Elder (23 to 79 B.C.) wrote of pimples caused by sweat in his *Natural History*.

Causes of Prickly Heat. Today we know that prickly heat is caused by obstruction of sweat gland openings. Sweat is trapped within the dermal layer causing localized irritation and inflammation, itching and generalized discomfort. The term "prickly" describes sensations variously referred to as "stinging" or "stabbing." The disorder is visible as clusters of pinhead-size bumps.

Prickly heat occurs most commonly during humid conditions with temperatures above 90°F and low wind velocity. It may appear during febrile illness when the skin is covered with heavy or obstructive clothing that causes intense sweating. Skin areas subjected to friction, such as the belt line, are especially vulnerable. The

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in the service of pharmacy

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CORRESPONDENCE COURSE

Continued from page 29

condition also occurs when individuals sit or lie for extended periods on rubber or plastic sheets which retard sweating. Thus, the disorder may occur at any age.

Types of Prickly Heat. There are several types of prickly heat. *Miliaria crystallina* describes the condition caused by sweat duct obstruction within the stratum corneum, just beneath the surface of the skin. A larger vessel, 1 to 2mm in diameter, forms over the skin surface. This condition occurs on the neck, axillae, and chest of infants, although it also appears on persons of all ages.

Lesions are usually asymptomatic until they are broken open by rubbing or scratching. Lesions filled with clear fluid, which can be easily broken with the fingernails, are characteristic of *miliaria crystallina.*

When obstruction occurs deeper within the epidermis, the disorder is termed *miliaria rubra* because of its red coloration. Miliaria rubra may be confused with contact dermatitis or drug eruption. It is the only form of prickly heat characterized by inflammatory lesions. Sweating causes small red nodules (solid bumps) that overlay red vessicles. Itching and burning quickly follow any event which induces sweating.

Miliaria profunda describes obstruction of the sweat duct within the upper dermis. This type predominately occurs on the trunk and upper legs. It results in flesh-colored or whitish papules. *Miliaria profunda* is often asymptomatic, and waxes and wanes with sweating.

Although sometimes referred to as "goose-flesh," *miliaria profunda* should not be confused with *cutis anserina.* This is an evanescent (i.e., disappears quickly) follicular disorder associated with cold and shock, rather than heat and sweating.

Any injury to the sweat duct can cause obstruction to sweat flow. The patient may remain asymptomatic until sweating is stimulated.

Prickly heat occurs more frequently in infants, geriatrics, and other persons with atopic disease than in young and middle-aged adults. *miliaria crystallina* generally clears quickly without complications, with or without treatment.

Miliaria rubra may persist for two to three weeks while sweat ducts remain obstructed. With repeated skin damage, as from persistent scratching, additional pathology occurs leading to *miliaria profunda.* Secondary infection may occur with *miliaria rubra,* including impetigo and folliculitis. It is, therefore, important to keep affected areas clean at all times.

When widespread obstruction to sweating

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occurs, as when 50 percent or more of the body surfaces is affected, anhidrosis (cessation of sweating) may result. In hot environments when body temperature regulation depends on properly functioning sweat glands, this may lead to serious complications.

Treatment and Prevention. Miliaria is best treated by preventing any stimulus that initiates sweating. This is accomplished by remaining in a cool environment and avoiding heavy work and exercise. Air conditioning may help severely affected persons.

Clothing should be loose fitting, light-weight, and absorbent. Lying on a sheepskin mat, and removing plastic or rubber mattress covers are beneficial. During periods of prickly heat flare-up, plastic diaper covers (rubber pants) should not be placed on infants.

Cool sponge baths with a colloidal oatmeal product followed by application of a cooling skin lotion are helpful. Hydrocortisone 0.5% lotion or cream may help reduce local inflammation causing obstruction, but this should be reserved for persons two years of age and older, unless specifically ordered by a physician.

Diaper Rash

Diaper rash (diaper dermatitis, napkin rash, nappy rash) is a common skin irritation in infants. It reportedly accounts for up to 20 percent of all physician consultations for children five years of age and younger. In one study, approximately 35 percent of all infants experienced diaper rash. Incontinent adults may also suffer from diaper rash.

Diaper rash is different than prickly heat, although they may physically appear the same. Diaper rash is also occasionally confused with other cutaneous disorders including candidiasis, dermatitis, psoriasis, scabies, and herpes simplex. Specifically, diaper rash is a localized, red, inflammatory response that results from dermal contact irritation caused by urine, feces, or both.

Occasionally, the rash may appear on areas other than those in contact with a diaper, such as the arm or face. When this occurs, it represents involvement of some factor other than the primary affliction causing the diaper rash. These infants should be examined by a physician before being treated with OTC remedies.

Types of Diaper Rash. Diaper rash is categorized into four separate, distinguishable forms: chafing dermatitis, demarcated confluent erythema, discretet shallow ulcerations, and a beefy red erythema with confulent rash.

Chafing dermatitis is the most common type. It is characterized by mild redness and scaliness offer the area in contact with the diaper. The discretely demarcated confluent erythema rash is confined to skinfold areas and sometimes has an associated white exudate present. Discrete shallow ulcerations, a third form of diaper rash, appears over the entire diaper area. A beefy red erythema with confluent rash is the form of diaper rash frequently associated with pustules. It is usually caused when the rash is compounded by infection with a fungus such as *Candida albicans.*

Causes. There are many theories supporting causes of diaper rash and even more proposed methods of prevention and treatment. It is unfortunate that the exact etiology remains unknown. However, most authorities believe the condition represents a type of irritant contact response.

Diaper rash develops when the skin remains in contact with urine or feces for an extended period of time. The precise component of urine or feces which initiates the problem remains elusive. A single component of either urine or feces, or a combination of substances may be responsible.

The first proposed cause of diaper rash was published in 1886. This theory stated that a strong ammonia odor was present whenever diaper rash appeared, so the problem was therefore, due to ammonia. Today, many experts still adhere to this theory.

The evidence in favor or ammonia as the cause of diaper rash is strongly suggestive. For example, an ammonia-liberating bacterium *Brevibacterium ammoniagenes* can be readily cultured from urine of infants with the condition. Other microorganisms that can split urea to produce ammonia have also been identified. These are present in high concentrations in urine of affected individuals.

Conversely, the ammonia theory has been challenged by others. Some studies show that ammonia levels actually are the same in urines of affected and unaffected infants. Studies also reveal that when ammonia is applied with occlusion to the buttocks of infants over a 24-hour period, at concentrations five times that normally found in urine, it fails to produce an inflammatory response. Even *Brevibacterium ammoniagenes* and the other ammonia-liberating microorganisms have been reported in urine of infants who do not have the dermatitis.

A more plausible theory is that diaper rash is not caused by ammonia *per se,* but by a combination of components of decomposing

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CORRESPONDENCE COURSE

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urine. These could be microbial or chemical. The ammonia odor may or may not be coincidental.

Fresh urine applied to skin of infants affected by diaper rash does not cause the problem. When it is allowed to stand at room temperature for several hours and is then applied, it can irritate the skin.

The yeast *C. albicans* is reportedly found on the skin of over 80 percent of all infants affected with diaper rash. When the skin's normal defenses are broken by other causative factors, the infection can occur.

Moisture *per se* does not cause diaper rash. It enhances microbial growth and thereby increases the chance for rash. The time period that a wet diaper must remain in place before a problem develops is unknown and probably differs with each infant. Frequent diaper changes both prevent and treat diaper rash.

The issue of pH is controversial. Some studies show that alkaline urine and feces left in contact with skin cause diaper rash, whereas acidic contaminants do not. The studies are not uniform, and their results are extremely variable. It is known that microbial growth is generally suppressed by an acid medium. When diaper rash is caused or aggravated by microoganisms, the local pH may be an important variable. Proponents of ammonia as an initiating factor raise the point that it is primarily responsible for raising the normally acidic urine to an alkaline pH. This is more irritating than recently voided urine.

Skin irritation may occur when diapers rub against the skin. Mechanical irritation may, therefore, play a significant role in development of diaper rash.

Prevention/Treatment. Because the precise cause of diaper rash is unknown, specific treatment is impossible. Prevention, therefore, is of utmost importance.

The need for frequent diaper changes must be stressed to parents. The diaper should be changed as soon as possible after it becomes wet. The diaper area should be thoroughly cleansed with warm water and a mild soap, and completely dried before a clean diaper is applied.

'Dry' diaper corners should not be used to wipe the baby's skin. Although they appear clean, they may contain millions of microorganisms. If the microorganisms are not removed by cleansing, the chance for infection is increased when the baby urinates the next time.

Infants who are highly susceptible to diaper rash may be placed on an open diaper during naps. Babies frequently urinate shortly after falling asleep. Therefore, they can be periodically checked and the diaper replaced if necessary.

Occluding the skin with rubber or plastic pants over the diaper should be avoided. These items are suitable for brief periods when the infant is away from home. Occlusion causes increased hydration of the diaper area.

Consumer-directed advertising strongly suggests that certain types of diapers are better than others. No study has demonstrated significant benefits of cloth over disposable diapers and vice versa.

Significant differences arise between commercially laundered and home laundered diapers. Commercial laundry services clean diapers at high temperatures which very effectively destroy all microorganisms. They also remove chemical irritants afterwards with thorough rinsing. These diapers are as clean and sterile as possible.

Parents washing diapers at home should use hot water followed with thorough rinsing and the hot cycle of the clothes dryer. Before wahing diapers, soaking them in a household bleach solution (diluted as directed on the label) or vinegar (one cup vinegar in a half-filled washing machine tub) may help reduce the potential to irritate the skin.

The compounds listed in Table 1 are available over-the-counter for treatment of diaper rash. Products containing boric acid, including powders, ointments and solutions, have long been used. However, boric acid can be readily absorbed across inflammed and irritated skin and several infant fatalities have been reported from its use. For this reason, boric acid or products containing it should not be used to treat diaper rash.

TABLE 1

Representative OTC Products for Treating Diaper Rash

Product	Manufacturer	Form
Balmex Baby	Macsil	Powder
Desitin	Leeming	Ointment
Diaperene	Glenbrook	Cream Powder
Diaperene Peri-Anal	Glenbrook	Ointment
Mexana Medicated	Plough	Powder
Taloin	Adria	Ointment
ZBT Baby	Glenwood	Powder

Products containing quaternary ammonium compounds are sometimes applied directly to the skin, and others are used as diaper rinses. Some studies demonstrate that these substances reduce the occurrence of diaper rash; others show conflicting results.

Products containing hydrocortisone 0.5% are not indicated for use on infants less than two years of age. When they are used on older children, application should be restricted to less than one week to minimize the risk of systemic toxicity from absorption. Hydrocortisone treats symptoms without altering their actual cause, and a potential for toxicity due to absorption from occulded areas exists. For these reasons, products containing zinc oxide or another skin protectant should be tried before reverting to hydrocortisone.

One of the most popular OTC items used in diaper changes is talcum powder. Talcum may help soothe and dry moist skin, but it has not been proven that it actually prevents or treats diaper rash. Products containing corn starch should not be applied because this serves as culture medium for *C. albicans* which can worsen the problem.

Overview

Prevention is the best treatment for both prickly heat and diaper rash. For the former, stimuli to sweating should be avoided as much as possible. For the latter, careful and meticulous detail to maintaining prompt diaper changes with frequent airing of the baby's skin are important.

Since neither disorder is overly serious in most cases, sometimes a cavalier attitude about prevention and/or treatment occurs. It is true that in most cases the disorders cause little more than discomfort, but complications such as secondary infection can result.

OTC products are useful to help prevent and to treat these afflictions. Persons using them should be aware of the limitations and the expected outcomes. There is probably no proven difference in various products in Table 1 that contain one or more ingredients. However, if one product fails to provide adequate relief, another one containing different ingredients could be tried. Persistent or long-standing conditions should be referred to a physician.

Poisoning Risk. The literature supports the belief that infants are at high risk of poisoning during diaper changes. One poison control center received inquiries in a three-month period relating to 138 exposures to potential poisons in children three years of age and younger. These children were being attended to at the time. One hundred twelve (81%) of these children ingested or inhaled one or more of 30 diferent substances by grabbing the product when the parent looked away. The remaining 26 children were given the item to hold while the diaper was being changed. Parents should be warned to keep dangerous items out of the reach of children during diaper changes.

CORRESPONDENCE COURSE QUIZ

Prickly Heat and Diaper Rash

1. The prickly heat condition characterized by flesh-colored papules that is often asymptomatic, and waxes and wanes with sweating, is best described as which of the following?
   a. Crystallina
   b. Erythematosus
   c. Profunda
   d. Rubra

2. The major cause of prickly heat rash is:
   a. bacterial invasion by staph organisms.
   b. localized contact dermatitis.
   c. obstruction of sweat gland openings.
   d. yeast invasion by Candidal organisms.

3. The household item that is best to recommend for soaking diapers to reduce the potential for diaper rash is:
   a. ammonia water.
   b. baking soda.
   c. milk.
   d. vinegar.

4. The prickly heat condition that occurs deep within the epidermis, and is the only form characterized by inflammatory lesions, is best described as which of the following?
   a. Crystallina
   b. Erythematosus
   c. Profunda
   d. Rubra

5. Anhidrosis is a condition characterized by:

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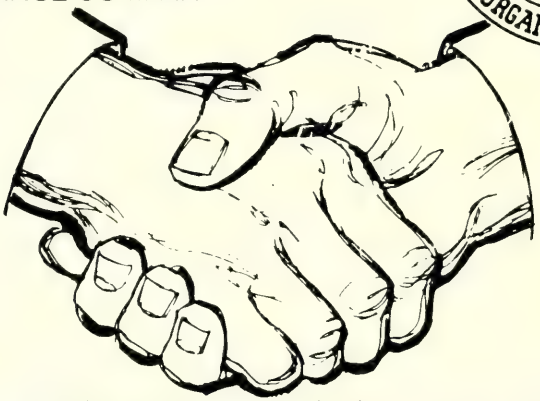

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CORRESPONDENCE COURSE

Continued from page 33

a. a staphyloccal infection.
b. cessation of sweating.
c. excessive ammonia in the urine.
d. gooseflesh.

6. Which of the following are ammonia-liberating bacteria that are readily cultured from urine of infants with diaper rash?
   a. Brevibacteria
   b. Candida
   c. Propionibacteria
   d. Staphylococci

7. The synonym for prickly heat is:
   a. cutis anserina.
   b. diaper rash.
   c. eczema.
   d. miliaria.

8. A parent requesting an OTC topical diaper rash product in an ointment dosage form for her baby should be told about which of the following products?
   a. Balmex
   b. Desitin
   c. Mexana
   d. ZBT

9. The prickly heat condition characterized by the appearance of lesions filled with clear fluid that break down when scratched, is best described as which of the following?
   a. Crystallina
   b. Erythematosus
   c. Profunda
   d. Rubra

10. Which of the following organisms are most likely to cause an infection in an infant with diaper rash, if the skin's normal defenses are broken?
    a. Brevibacteria
    b. Candida
    c. Propionibacteria
    d. Staphylococci

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Prickly Heat and Diaper Rash

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- If more than two questions are answered incorrectly, the test is failed. You will be given one opportunity to submit a second answer sheet.

Please circle correct answers

1. a b c d	4. a b c d	7. a b c d
2. a b c d	5. a b c d	8. a b c d
3. a b c d	6. a b c d	9. a b c d
		10. a b c d

Evaluation: Excellent Good Fair Poor

_____

name

_____

address

ASCP PUBLISHES WHEELCHART FOR NONCHEWABLE AND NONCRUSHABLE DRUGS

The American Society of Consultant Pharmacists (ASCP) has produced a useful wheelchart that pharmacists will want to have for quick reference on drugs that should not be chewed or crushed. This chart, made of durable, cleanable plastic that resists medication stains, suggests alternatives and comments for more than 300 drugs in an easy-to-read format.

Pharmacists working in long-term care facilities or in other health care settings will find this chart especially practical because they can attach it to medication carts by a magnet tab or hang it by the eyelet. The chart also has a space reserved under the heading "Questions? Consult Your Pharmacist" where a pharmacy's business label can be affixed.

The ASCP wheelchart, **Drugs That Should Not Be Chewed or Crushed,** is available from the Society at volume discount rates. They are offered at $14 each for an order of 1-25 charts ($12 each for ASCP members); $12 each for 26-50 charts ($10 each for members); $10 each for 51-100 charts ($8 each for members); and $8 each for 100 or more ($6 each for members). All orders must be prepaid. Payment may be by check, purchase order from recognized institutions (postage and handling additional), MasterCard or Visa. If ordering by credit card, be sure to indicate the type of card, your card number and expiration date, and sign the order with your full name as it is shown on your credit card. All checks must be in U.S. funds.

Send orders to: ASCP, American Society of Consultant Pharmacists, 2300 Ninth St., South, Suite 515, Arlington, VA 22204. Phone orders accepted, but additional shipping and handling charges will be made. Call ASCP at 703/920-8492.

HEALTH NEWS IN CONSUMER MAGAZINES

Capsule summaries from current issues. Our intention in including these excerpts from consumer magazines is to provide you with a sampling of those items that your customers are reading in the lay media. Inclusion of any item does not imply our endorsement or rejection of its content.

Flake Maneuver (for Chokers): Do-it-yourself is the prescription for a person choking on food who does not have a companion present to do the Heimlich Maneuver. The Flake Maneuver (devised 30-40 years ago by Dr. Carlyle Flake) is recommended by Dr. Randolph Byers of Needham, MA. Here's the procedure: If choking, quickly place yourself prone, head downward on an inclined surface. Alternate positions including lying on a staircase with your head down and your hands propped at the bottom, or hanging your head down over the back of an armchair or lying face down on a sofa or bed with your head hanging off toward the floor. Usually, the food stuck in your windpipe will just pop out, without the need for backslapping (which requires the presence of another person).

—American Health (March)

Bedtime Booze Reflux: A nightcap before retiring may do more than ease the imbiber into restful sleep. The alcoholic beverage at bedtime may stimulate gastric acid production and result in nighttime heartburn (gastroesophageal reflux), according to a study conducted by Dr. Gary C. Vitale, University of Louisville. The alcoholic nightcap has been found to inhibit the normal clearance of gastric acid, particularly when the drinker is in the supine position.

—Vogue (March)

DISEASE HOTLINES

Consumers who seek information about Asthma may call 1-800-822-2762. For information about Kidney Disease or Urologic Disorders, call 1-301-468-6354.

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In replying to "blind" ads, address Ad. No., Carolina Journal of Pharmacy, P.O. Box 151, Chapel Hill, NC 27514. Telephone (919) 967-2237.

HOSPITAL POSITIONS OPEN

PHARMACIST WANTED: Director of Pharmacy for 64-bed hospital in Southeastern North Carolina. Excellent hours, salary negotiable, and good fringe benefits. Contact Tom Smart at (919) 582-1776.

PHARMACISTS WANTED: Due to expansion, pharmacists are needed 1st and 2nd shifts. Pharmacy is decentralized with unit dose and IV-Admixtures. Other services include: nutrition support and drug information. Salarys are negotiable depending upon experience. For more information send resume or call collect: Letha Huffman, NC Baptist Hospital, 300 S. Hawthorne Road, Winston Salem, NC 27103. (919) 748-4717. EOE.

DIRECTOR OF PHARMACY: Pungo District Hospital in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Pharmacy. Salary negotiable and commensurate with experience. Interested parties should contact the administration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

PHARMACIST WANTED: Iredell Memorial Hospital is a modern, community, acute-care hospital with a reputation for excellence. We are adding new pharmacist positions. New schedule reduces evening and weekend shifts. New salary scale. Computerized unit dose, IV Admixture services, and therapeutic drug monitoring programs. New graduates are encouraged to apply. Contact Beverly Wilkerson, Director of Personnel or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

PHARMACIST WANTED: To fill recent vacancy on staff of a 333 bed community hospital in Goldsboro, North Carolina and join an eight pharmacist staff in a progressive environment in Eastern NC. Salary offered ranged from $34,382 (new graduate) to $37,918 (with 5 yrs. or more applicable experience) for a forty hour week with every other weekend off. Seriously interested pharmacists should send a resume to: Director of Human Resources, Wayne Memorial Hospital, 2700 Wayne Memorial Drive, Goldsboro, NC 27530.

STAFF PHARMACIST NEEDED: Staff pharmacist needed for 142-bed acute care hospital located in Sanford, NC, with computerized mobile pharmacy services, IV Admixture, oncology clinic. Responsibilities include membership on hospital committees and participation in the department's quality assurance and drug utilization reviews, drug therapy monitoring, patient and nursing education. Competitive salary and benefits package, educational allowance. Contact Edna Perkinson, Director of Pharmacy, or the Human Resources Department, Central Carolina Hospital, 1135 Carthage Street, Sanford, NC 27330.

RETAIL POSITIONS OPEN

PHARMACIST WANTED: We are seeking an ambitious, and professional, career-minded individual for a pharmacist position in Greensboro, High Point and Winston-

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CLASSIFIED

Continued from page 37

Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure pharmacy setting", If interested call Lew Thompson at 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke, VA 24038. EOE.

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PHARMACISTS WANTED: Farmco Drug Centers have present positions available in Rocky Mount, Elizabeth City and Goldston, North Carolina. For more information call collect Buddy Liebowitz at (804) 858-6063.

PHARMACISTS WANTED: Due to rapid growth Kerr Drug Stores now have positions available for pharmacists in Rocky Mount, Tarboro, Raleigh, Fayetteville, Wilson and Aberdeen. Kerr Drug offers opportunity for growth and in store management. Excellent benefits. Send resume to Jackie Gupton, P.O. Box 61000, Raleigh, NC 27661, or call (919) 872-5710.

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PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACISTS WANTED: Full-time pharmacists needed for Eckerd stores in Albemarle, High Point, Salisbury, and Spencer, North Carolina. Interested parties may call (919) 882-8412 or (919) 841-7308 to set up interview date and time.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

PHARMACIST NEEDED: Professional pharmacist needed for Southeastern NC store. Excellent salary and benefits. Outstanding working conditions. Contact Lazelle Marks in Rockingham at (919) 997-4471.

PHARMACIST WANTED: Pharmacist wanted for aggressive pharmacy in Haw River. Would like potential candidate to be interested in buy-in opportunity. Competitive salary and benefit package. Please contact David Smith at (919) 578-0202.

PHARMACIST NEEDED: Pharmacist needed in Raleigh area for 32 hours a week. Consulting experience helpful. Contact Wayne Creech, Medi-Save Pharmacy at (919) 968-8478.

RELIEF WORK

RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call (919) 481-1272 evenings.

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WANT TO BUY: This Iowa pharmacist licensed in NC would like to purchase a pharmacy in Eastern NC. Strictly confidential. If you are interested in selling your pharmacy, please contact Box RTU, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PROFESSIONAL PHARMACIES: Several small prescription-oriented pharmacies are currently available for individual ownership in North Carolina. These opportunities provide the vehicle to practice pharmacy the way you were taught, while offering an attractive income and more time to be with your family. In some cases, financing is also available to qualified candidates. For more information write: Jan Patrick, 1100 N. Lindbergh, St. Louis, MO 63132.

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PHARMACY FOR SALE: Pharmacy for sale in Piedmont. Gross sales over $300,000 a year. Contact Box TVD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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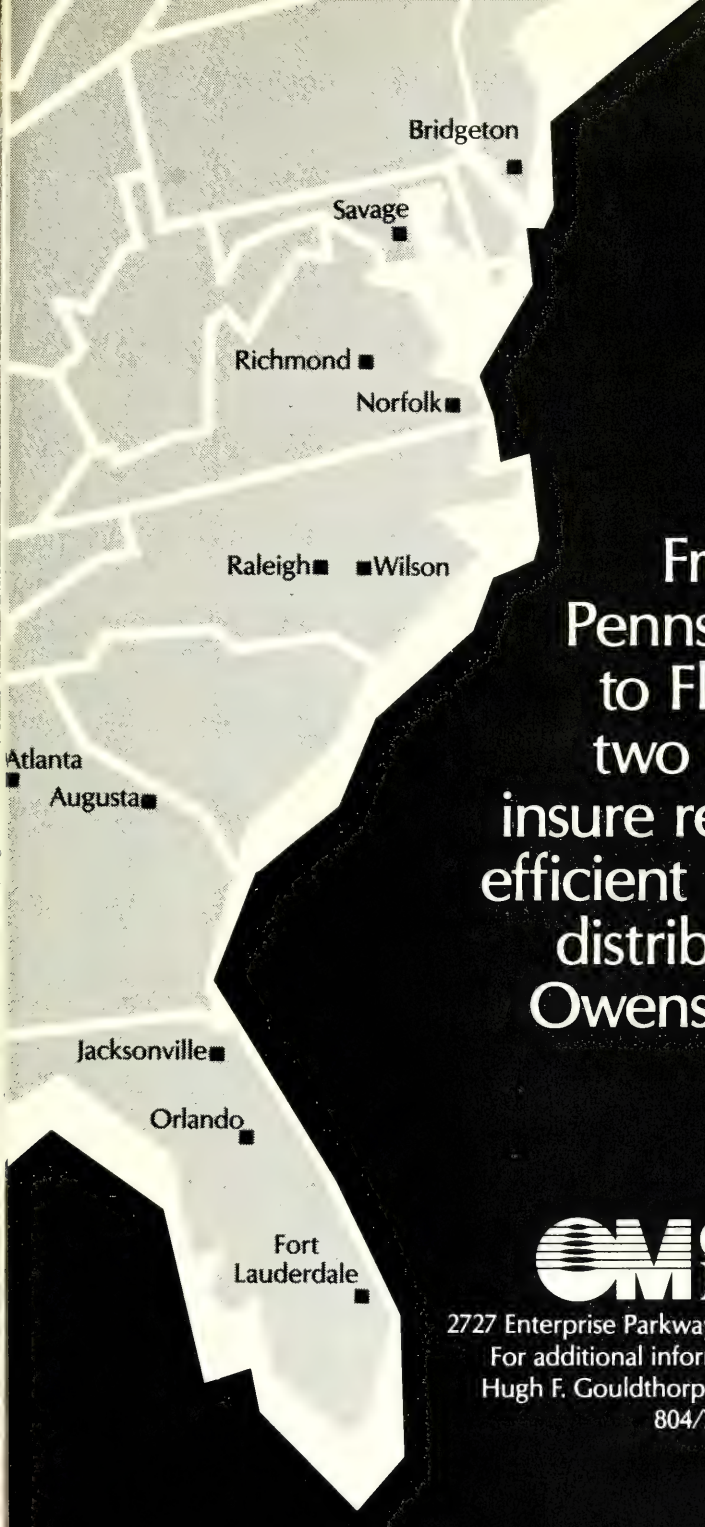

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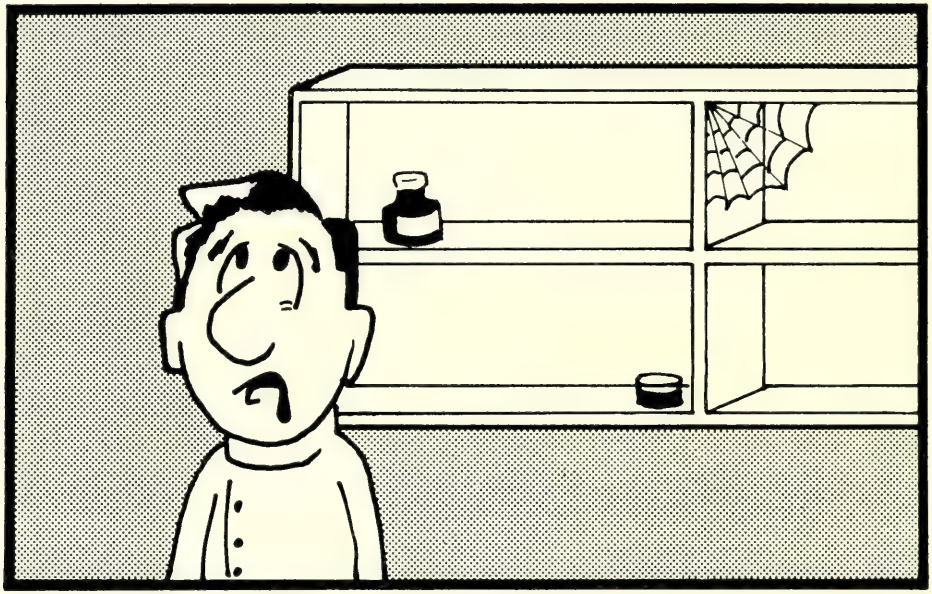

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Vice-Pres., John Woods, 718 Engleman Ave., Burlington 27215
Sec.-Treas., Jack G. Watts, 444 Tarleton Ave., Burlington 27215

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Sec.-Treas., J. Frank Burton, 120 E. Lindsay St., Greensboro 27401

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Vice Pres., Sharon Perry, P.O. Box 725, Dunn 28334
Sec.-Treas., Edith Caviness, P.O. Box 515, Lillington 27546

High Country Pharmacy Society
Contact People:
Debbie Turner, Rt. 1, Box 398, Banner Elk 28604 (704) 262-4100
Tom Taylor, (704) 262-4100

Lincoln County Pharmaceutical Association
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Pres. Elect, George Brookins
Vice Pres., Beverly Roberts
Sec., David Keever, Hidden Valley, Rt. 7, Box 737, Lincolnton 28092
Treas., Ann Keever, same as above

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1st Vice Pres., Robyn Hoppe, 5915 Carmel Station Ave., Charlotte 28226
2nd Vice Pres., Jane Hoyle, Charlotte Memorial Hospital
Treas., Deborah Smith, 3200 East Ford Rd., Charlotte 28205
Sec., Suzanne Sweptston, 3423 Sudbury Rd., Charlotte 28205

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Sec., Jim Heinz

New Hanover County Pharmaceutical Society
Inactive — Contact Person:
Jim LeCroy, 5454 Eastwind Rd., Wilmington 28403 (919) 395-5373

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Continued from page 9

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Sec.-Treas., Bill Manning, Rt. 1, Box 77, Columbia 27925

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Vice-Pres., Kim Bullock Frazier, Rt. 5, Box 35-C, Roxboro 27573
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Vice Pres., Elaine Porter, 1609 Morningside Ct., Kannapolis 28081
Sec.-Treas., JoAnn Harlow, 503 Queen's Gate, Kannapolis 28081

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Sec., Sherry Denning, Rt. 1, Box 53, Four Oaks 27524
Treas., Robert Worley, P.O. Box 760, Goldsboro 27530

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Treas., Bob Wisham, 22 Pinehurst Rd., Asheville 28805
Sec., George Mephin, (704) 298-7911, Ext. 5553

Wilson County Pharmaceutical Association
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Cor. Sec., Bill Williams, c/o Pharmacy Dept., NC Special Care Center, Wilson 27893, (919) 399-2109
Rec. Sec., Brame Morrison
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Please notify NCPhA when any changes occur by calling 1-800-852-7343.

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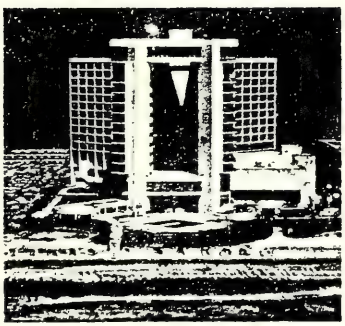
Goldsboro, NC
John Thigpen, ph-mgr.

Wal-Mart Pharmacy
314 Plaza Dr.
Mooresville, NC
Robert V. Gibson, ph-mgr.



PLAN AHEAD!

1989 NCPhA Annual Convention

May 17-21

North Myrtle Beach Hilton

North Myrtle Beach, SC

HOUSE BILL 1130
Second Edition Engrossed 5/21/87
Senate Committee Substitute
Adopted 6/24/88

Short Title: Anabolic Steroid as Controlled Substance.

May 4, 1987

A BILL TO BE ENTITLED
AN ACT TO PROVIDE THAT ANABOLIC STEROIDS ARE INCLUDED AS A CONTROLLED SUBSTANCE.

The General Assembly of North Carolina enacts:

Section 1. G.S. 90-91 is amended by adding a new subsection to the end to read:

"(k) Any anabolic steroids, unless dispensed with a prescription by a registered pharmacist. The term 'anabolic steroid' means any material, compound, mixture, or preparation containing an anabolic steroid, including, but not limited to, the following:

(1) methandrostenolone,
(2) stanozolol,
(3) ethylestrenol,
(4) nandrolone phenpropionate,
(5) nandrolone deconoate,
(6) testosterone propionate, and
(7) chorionic gonadotropin."

Sec. 2. This act shall become effective October 1, 1988, and shall apply to offenses occurring on or after that date.

NCPhA AFFILIATES

GUILFORD COUNTY SOCIETY OF PHARMACISTS

Members and guests of the Guilford County Society of Pharmacists gathered at the Marriott on Sunday evening, June 26th, for a 2.0 hour C.E. program followed by a "southern style pig pickin' ". The meeting was jointly sponsored by the Society and Glaxo Pharmaceuticals. The speaker for the program on "Gastroesphageal Reflux Disease" was Dr. Dan W. Teat of Campbell University School of Pharmacy. Dr. Teat's presentation was both timely (considering the meal that was to follow) and interesting, despite his having to make his talk in virtual darkness due to a storm related power outage at the Marriott! The beer and barbecue was then served up by candlelight, and everyone had a great time and an evening to remember!

Frank Burton
Sec. Tres.

WAKE COUNTY PHARMACEUTICAL ASSOCIATION

Approximately twenty members met for dinner at Balentine's on Tuesday, June 14, 1988 at 6:45 p.m. Following the dinner, officers for 1988-89 were installed by Al Lockamy, President of the North Carolina Pharmaceutical Association. The newly installed officers of the Wake County Pharmaceutical Association are: Benny Ridout, President; Rebecca Wheeler, Vice-President; Gigi Frederick, Secretary; John Myhre, Treasurer; Patti Ellsworth, Executive Member At Large; and Barry Mangum, President Elect.

Martha Peck, Chairperson of the Bylaws Committee, presented new bylaws to the group. Plaques were presented to Mike Stegall, Past President of the Wake County Pharmaceutical Association and Benny Ridout, Pharmacist of the Year for Wake County.

PERSON COUNTY SOCIETY OF PHARMACISTS ROXBORO, NORTH CAROLINA

Person County Society of Pharmacists 1988-89 Officers: *From left,* Kim Bullock Frazier, Vice-President; Jim Street, At-Large Member, Executive Committee; Sally Boyce Brown, President; Tom Oakley, At-Large Member, Executive Committee; Ben Tillett, Secretary-Treasurer. (Staff photo.)

Pharmacists present: Ronnie Chandler, Kim Frazier, Ted Michie, Ben Tillett, Jimmy Street, Norman Bowen, Al Cole, Tom Oakley, Sally Brown, Wheeler Carver.

Guests: Mr. Jack Watts, RPh, Burlington, NC; Mr. Al Mebane, RPh, Chapel Hill, NC.

President Sally Brown presiding: June 12, 1988.

The first order of business was the election of two Members at Large to the Executive Committee: 1. Tom Oakley; 2. Jimmy Street.

It was decided that meetings will be held at Person County Memorial Hospital in the Inservice Classroom on a regular basis except for special dinner meetings which will be announced in advance.

Mr. Watts presented a constitution which has been used by several other local pharmacy organizations for some time now. The adoption of the constitution was approved by a unanimous vote of the pharmacists present.

Mr. Watts was extended a sincere thank-you by the PCSOP for his help in the establishment of the organization.

At this point the meeting was turned over to Mr. Al Mebane, Executive Director of the North Carolina Pharmaceutical Association. Mr. Mebane presented President Sally Brown with an "official" gavel of the PCSOP. He then followed his presentation with remarks concerning the importance of local pharmacy organizations. Both the continuing education and political aspects were emphasized. Mr. Mebane reported that the North Carolina Legislature should vote to increase the fee paid to pharmacies for Medicaid prescriptions this year but did not know what the exact amount or percentage would be. He also reported that a legislative study concerning mail order prescriptions has reported favorably as an option for the state employees' health plan. Mr. Mebane also urged pharmacists to contact their congressman concerning physician dispensing. The proposed legislation is contained in House Bill number 1207 — Physician Dispensing Bill. He also reported that the NCPhA has a toll free telephone number: 1-800-852-7343. PCSOP also extended thanks to Mr. Mebane for his interest and attendance.

It was decided that the first regularly scheduled meeting would be held on Sunday September 4, 1988. Plans are being made for a 2 hour continuing education program for that meeting.

Meetings for next 12 months: September 4, 1988; November 6, 1988; January 8, 1989; March 5, 1989; May 7, 1989; July 2, 1989. All meetings are scheduled to begin at 7:00 PM.

At this point, president Sally Brown adjourned the meeting.

Submitted by: Ben Tillett

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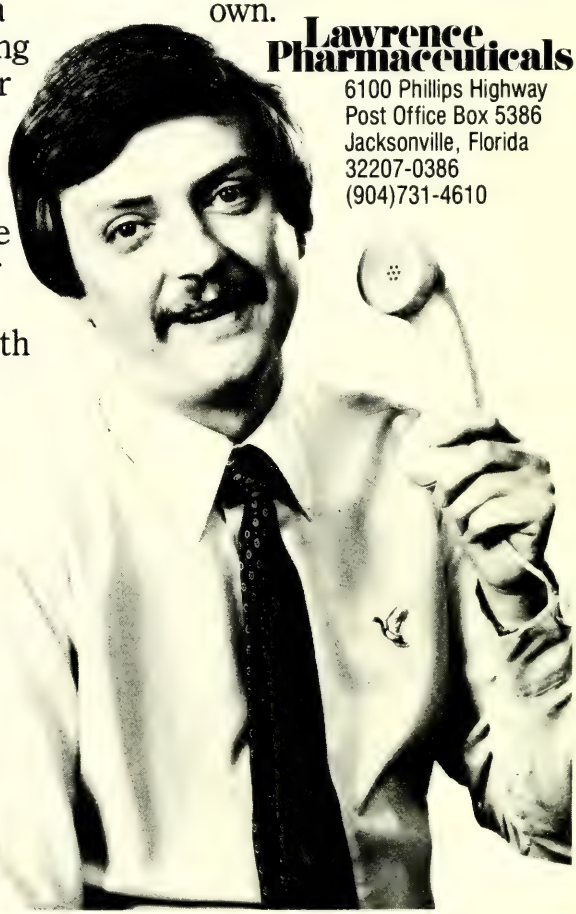

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REPORT OF THE 1925 PHARMACY MUSEUM COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

Williamsburg has its colonial pharmacy. . . New Orleans proudly has on public display a turn-of-the-century pharmacy. . . And in Mystic, Connecticut a maritime pharmacy is located. . .

Soon, with the joint cooperation of the N.C. Pharmaceutical Association and the N.C. Museum of History, North Carolina will have a complete 1925 Pharmacy Exhibit open to the public as a part of the new — and greatly expanded —North Carolina Museum of History at Raleigh. Groundbreaking for the new $25 million facility is set for July 6, 1988.

The project includes not only an entirely new building, but also a 500-car parking garage on an underground level. The new museum site is between the Capitol and the Legislative Building and is currently being used as a parking lot.

The present museum has less than 15,000 sq. ft. of display space for its 350,000 artifacts; the new facility will have 50,000 sq. ft. available for displays and exhibits.

the new museum will feature an urbanscape, complete with live trees and plantings. In addition to the 1925 pharmacy exhibit included, there will be a grocery store and other business establishments of the 1925 era as a part of the street scene. Plans for the project also call for a restaurant and meeting areas to be made available for public functions and receptions.

Space commitment for the 1925 Pharmacy Exhibit is 28 feet wide, 56 feet deep, and 26 feet high. Total floor space allocated for us: 1558 square feet.

For the past year, a broadly based committee composed of members from the NCPhA and its two affiliated auxiliaries, has been involved in the preliminary phases of the pharmacy exhibit: floor layout, collection of artifacts, and availability of funds to underwrite cost of transporting the necessary fixtures and inventory to Raleigh. Reassembling the pharmacy in the museum building will be of special interest.

Since the Pharmacy exhibit is to be a complete 1925-era pharmacy, it will include: an operational soda fountain with booths and soda tables; prescription department including drugs of that era; camera, candy, tobacco, cosmetic displays; many patent medicines, drug sundries, and other merchandise common to a 1925 pharmacy.

Some of the needed artifacts have been contributed. However, in the immediate months ahead, the Committee will be searching for additional items to complete the Pharmacy. They urge your participation in this project by helping in the "search" and also by suggesting areas to be covered in the 1925 pharmacy exhibit.

Major expense items anticipated will be moving and installing fixtures in the pharmacy, including a pressed tin ceiling, and a tile floor. Some members of the Committee, with prior knowledge of our fund needs, have contributed $3,000. Later on, additional financial support will be necessary.

There are some existing 1925-era pharmacies in operation in the state, but over the years they have been modernized and modified to make them contemporary. Therefore, even though they have been in existence since that time, they no longer represent a typical pharmacy of 1925. Also, Pabst's Okay Specific has been replaced by Penicillin; vitamin combinations slowed dominance of Lydia E. Pinkham's Vegetable Compound for Female Complaints, and castor oil has lost ground to ExLax and Feenamint.

The selection of an independent free-standing 1925 pharmacy site would necessitate an initial fund far beyond that envisioned by the Committee plus a foundation to underwrite cost of staff and utilities. By joining the N.C. Museum of History project, all these expense items are eliminated. But more important, in the case of the State Project, we are assured of thousands of visitors on an annual basis. We anticipate these will range from school-age children being brought in from their schools, to the ever-growing older population who fill find things familiar to them in their younger days.

Banks D. Kerr, Chairman of Kerr Drug Stores, has generously offered a special room in the newly completed Kerr Drug Warehouse addition, for a temporary storage of contributed pharmacy fixtures and inventory. We are grateful for Mr. Kerr's offer since it provides a central, nearby storage area for contributed pharmacy artifacts now located at various points throughout North Carolina.

Also, the Committee is especially fortunate to have the cooperation and expertise of Roland G. Thomas, head of Store Fixtures & Planning, Charlotte, who will supervise the installation of the pharmacy exhibit in the Museum. In the past, Mr. Thomas has been responsible for modernizing hundreds of pharmacy operations in North and South Carolina. In this instance, we are asking him to "demodernize" back to the 1925 era.

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MUSEUM REPORT

Continued from page 15

As has been pointed out in the past, the new North Carolina Museum of History will be much more than a State Museum. It will focus nationwide attention on North Carolina Pharmacy. To that end, the Committee solicits your cooperation and support.

Attached to this report is a partial listing of artifacts of the 1925 era needed to establish the pharmacy exhibit in the North Carolina Museum of History, Raleigh.

If you have in your possession — or have knowledge of — any such artifacts which you would be willing to contribute to this project, please write:

W.J. Smith, Committee Chairman
908 Arrowhead Road
Chapel Hill, N.C. 27514
Telephone (919) 929-2656

PHARMACY ARTIFACTS (FIXTURES & INVENTORY) OF 1925 ERA NEEDED TO ESTABLISH THE PHARMACY IN THE NORTH CAROLINA MUSEUM OF HISTORY, RALEIGH, NORTH CAROLINA

TOBACCO:
Cigarettes, Cigars, Chewing (Apple, Brown Mule); Smoking (Prince Albert), etc.

FOUNTAIN:
Marble faced fountain with syrup dispensers (Root Beer, Cherry Smash, etc.); Soda Tables and Chairs; Signs

CANDY:
Whitmans, Hollingsworth, Nunnally (Display Dummy Box)

CAMERA:
Box Cameras; Folding Eastman Kodaks; Film

COSMETICS:
Evening in Paris, Hudnut, Coty, etc.; Perfume/Toilet Water

SOAPS:
All brands of the 1925 Era

PATENT MEDICINES:
All Brands (SSS, Blood Life, Tanlac, Cardui, etc.)

DRUG SUNDRIES:
Hot Water Bottles, Syringes, Atomizer/Vaporizer, Tooth Brushes, etc.

PRESCRIPTION DEPARTMENT:
Pharmaceutical Reference Books (1925 and prior years), Balances-Scales-Weights, Graduates, Suppository Moulds, Pill Tiles & Spatulas, Cork Press, Mortars/Pestles (all types)

MISCELLANEOUS:
Show Globes, Castor Oil Pump, Ceiling Fans, Stamp Machine, Glass Straw Holder, Telephone, Typewriter.

If you have in your possession (or have knowledge of) any 1925 pharmacy artifact which you agree to contribute to this project, please write W. J. Smith, 908 Arrowhead Road, Chapel Hill, N.C. 27514 — or call (919) 929-2656.

W. J. Smith, *Chairman*
M. Keith Fearing, Jr., *Co-Chairman*

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Tom Burgiss	Milton W. Skolaut
George T. Cornwell	Rheta Skolaut
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Vivia R. Creech	B. R. Ward
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Robert B. Hall	W. Artemus West
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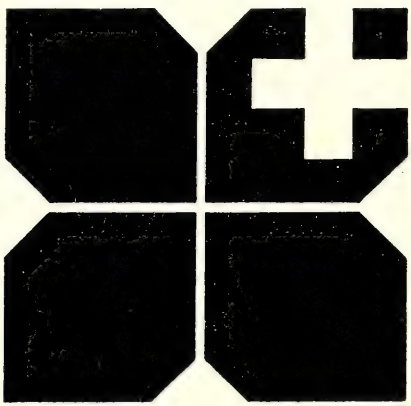

CHARLESTON, S.C.
GREENVILLE, S.C.

NEW MOLECULAR MODELING LABORATORY AT UNC SCHOOL OF PHARMACY EXPECTED TO MAKE DRUG DESIGN MORE EFFICIENT

Dean Tom Miya, assisted by Governor James Martin, cuts the ribbon in a ceremony on April 26, 1988, at the opening of the new Molecular Modeling Laboratory at the UNC-CH School of Pharmacy.

Taking the guesswork out of drug development is one of the goals of scientists using a new research laboratory for molecular modeling at the University of North Carolina at Chapel Hill School of Pharmacy.

Molecular modeling involves designing new drugs with the help of computer graphics and computations. Scientists use modeling techniques to find preferred molecular shapes.

"Scientists use shapes of molecules to design new drugs in much the same way engineers design buildings to fit into a certain shape and provide a specific function," said Dr. J. Phillip Bowen, director of the Teaching and Research Molecular Modeling Laboratory. "In a world of diminishing resources, we cannot afford to put as much manpower into the development of drugs the way they used to be made."

For every drug that gets on the market, Bowen said there might be 10,000 compounds that have been tested by a pharmaceutical company. He said that process requires thousands of manhours. Modeling techniques may make it possible to target certain potential drugs and drop the number to 5,000.

"That number may still sound staggering, but it is a significant improvement in terms of finances and resources," Bowen said. "Saving time and money on drug design should eventually result in more effective drugs and lower prices."

The laboratory was officially opened April 26 in a ribbon-cutting ceremony at the School of Pharmacy. Gov. James G. Martin was the featured speaker. Other speakers included UNC President C.D. Spangler, Jr., Dr. H. Garland Hershey, vice chancellor for health affairs, and Dr. J. Phillip Bowen, director of the laboratory.

Students, faculty and researchers using the laboratory, which opened in the spring semester, are working with more than $500,000 worth of specialized, state-of-the-art computer graphics hardware and software.

The new laboratory will allow UNC to continue to develop a strong computational chemistry-oriented curricula that will make the School of Pharmacy one of the nation's most advanced and best-equipped molecular modeling centers, Bowen said.

"We are training a new generation of chemists who must be familiar with computational techniques to meet the challenges of tomorrow," Bowen said. "There is a revolution occurring in the chemical and pharmaceutical communities as both industrial and academic researchers learn the significance and potential benefits that may be gained by using molecular modeling methods."

Said Dr. H. Garland Hershey, vice chancellor for health affairs, "The molecular modeling laboratory is an innovative approach to deal with a series of difficult-to-manage problems in pharmaceutical research. Creation of the laboratory is the result of the strong interdisciplinary cooperation for which the University is becoming well-known."

Twenty students were enrolled this past semester in a new interdisciplinary course in molecular modeling and computational chemistry. Students are learning different computer programs that are used in molecular modeling.

"This is the first course of its kind in the country that we are aware of," Bowen said. "Other schools have had sections dealing with this topic, but never a whole course dealing with computer-assisted drug design."

Faculty members teaching the course come

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WELCOME NEW MEMBERS, 1988!

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MOLECULAR LAB

Continued from page 19

from the pharmacy school's Division of Medicinal Chemistry and Natural Products and the departments of biochemistry, chemistry and computer science. Besides Bowen, other faculty members are Drs. Jan Hermans, professor of biochemistry and nutrition; Lee G. Pedersen and Bruce W. Erickson, professors of chemistry; and Frederick P. Brooks, Jr., Kenan professor of computer science. Other course faculty are from Duke University, as well as Burroughs Wellcome Co. and Glaxo Inc., both Research Triangle Park pharmaceutical firms.

Two internationally-known experts also lectured as part of the class. Dr. Norman L. Allinger, research professor of chemistry of the University of Georgia and a pioneer in the development of molecular mechanics methodology, came to UNC in February. Dr. Garland Marshall, professor of pharmacology at Washington University in St. Louis, lectured in March. He is the founder of Tripos Associates, a leading molecular modeling software vendor.

The laboratory also will be used by the Biological Sciences Research Center, part of the UNC School of Medicine. The center originally concentrated on biomedical research in mental retardation. Now center researchers also are studying the normal development of the brain and the nervous system.

Most of the computer hardware and software in the laboratory was donated by Tripos Associates, a division of Evans and Sutherland. Additional equipment and software was contributed by Tektronix, Polygen, and Silicon Graphics. Burroughs Wellcome and Glaxo also are supporting the laboratory through research grants, donations and by providing lecture speakers.

WE GOOFED . . . The names of the authors were omitted from the article entitled, "Health Promotion and the Activated Client," that appeared in the February, 1988 issue of *The Carolina Journal of Pharmacy*. They are: Regina Staten Young and Charles D. Reed, employees of the NC Division of Health Services. The NC Division of Health Services should have also been acknowledged for its support.

RITE OF THE ROSES 1988

The following members have died since our last annual meeting.

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Concord
Life Member

HOYT CARLYNN HEDRICK
Monroe

IRVIN J. PRUETT
Angier

GEORGE McLARTY
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REPORT OF THE CONTINUING EDUCATION COMMITTEE

Presented at the 108th Annual Convention, Asheville, May 18-21, 1988.

MINUTES
CONTINUING EDUCATION COMMITTEE
March 27, 1988

The Continuing Education Committee met on Sunday, March 27, 1988 at the Institute of Pharmacy. The previous meeting scheduled for Sunday, January 10 was cancelled due to snow.

Attendance: Betty H. Dennis, *Chairman*, William A. Dawkins, Patsy Myers, Al Rachide, Lloyd E. Ruona, Regina Snyder, Daniel W. Teat, Connie Webster

I. SOCIO-ECONOMIC SEMINAR

Discussion: The 1988 Socio-Economic Seminar was held on March 9 in Greensboro. Topics presented included pharmacy services, prescribing and dispensing. The afternoon format on "Communicating with Difficult People," a professional development topic, was very successful. Greensboro was considered a convenient site.

Recommendations: * Topics for the Socio-Economic Seminar should include annual updates on pharmacy law and third party reimbursement. Also, human resource management, employee relations and professional development topics are suggested.

* Future Socio-Economic Seminars should be held between the dates of the 10th-25th of March to enhance attendance. February is suggested as an alternate month.

II. PHARMACY PRACTICE SEMINAR

Discussion: The 1988 Annual Pharmacy Practice Seminar will be held in Wilmington on September 18 and will focus on "Management of Hypercholesterolemia." Merck Sharp & Dohme is providing an educational grant to support this program. Future topics and dates were discussed.

Recommendations: * Workshops should be incorporated into future seminars. Consider patient education and compliance, communication skills, patient interviews and assessment skills for OTC self-medication, mental health and diabetes as topics for future seminars.

* The preferred day and time for this Seminar is Sunday, two weeks after Labor Day weekend. October is suggested as the alternate month.

III. CONTINUING PHARMACEUTICAL EDUCATION (CPE) PANEL ISSUES

Discussion: NCPhA serves as a member of the Continuing Pharmaceutical Education (CPE) Review Panel. This panel reviews and approves for CPE credit programs sponsored by independent groups and organizations. Guidelines for Panel approval of programs were reviewed.

Recommendations: * Programs for CE credit should have a pharmacy or health care focus. Seminars developed for public audiences on topics for self-improvement or financial gain should not be acceptable.

* CPE Panel should review only programs offered by a sanctioned professional organization (local associations, organizations, etc.)

* CPE Panel should facilitate program development in North Carolina and not review programs offered out-of-state.

* Videos or audiotapes should be allowed as contact hours of CE credit only when presented to a sanctioned professional organization and when there is interactive time included in the program with a faculty/speaker expert on the topic. Videos and tapes used for small, informal groups with only a question and answer session conducted by participants (i.e. no official faculty/speaker) should be considered non-contact hours.

* Annually, summaries of guidelines for CE credit through the CPE Panel and N.C. Board of Pharmacy options for CE credit should be published in an issue of the Carolina Journal of Pharmacy.

* NCPhA CE Committee should serve in an advisory role to CPE Panel; however, the CPE Panel should have final word on approval of any specific program. It was noted that the N.C. Board of Pharmacy can approve providers of CE but cannot (by law) approve programs.

The meeting adjourned at 3:30 p.m.

Respectfully submitted,
Betty H. Dennis, *Chairman*

Larry D. Cole, R.Ph.	Lloyd E. Ruona
William A. Dawkins, P.D.	Ronald H. Small
Salmen T. Fayed	Regina Snyder
Howard M. Glazer	Daniel W. Teat
Patsy Myers	Connie Webster
Al Rachide	

HOME TESTING PRODUCTS FOR SELF-MONITORING

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University
Ada, OH

In his best-selling book *Megatrends*, Naisbitt[1] identified Americans' increasing reliance on medical self-care as one of the megatrends shaping the nation's health-care system for the future. Not surprisingly, home testing products constitute one of the most rapidly developing segments of the health-care market. Many medical tests that were once the sole province of physicians and commercial laboratories are now available in ready-to-use kits for people to use at home.

Home testing products — also known as over-the-counter or home monitoring products, home medical tests, and home diagnostics — are designed to be used for one of three purposes: (1) to detect a specific disorder or event, such as pregnancy or ovulation; (2) to screen for conditions in persons without predisposing symptoms, such as tests for fecal occult blood; and (3) to monitor an existing disease, such as blood glucose tests for diabetes or urine nitrite tests for urinary-tract infections.

The first home testing products were introduced nearly 50 years ago. Current annual sales of these products are estimated at $600-$800 million. The growth rate of sales is expected to exceed 25% per year, and sales could easily reach $2 billion by the early 1990s.[2,3] It is predicted that by the year 2000, each American household will regularly use at least one home testing product; most will use several.[4] Currently, 20% of American households use one or more of these products.[5]

Home testing products are quickly changing the way Americans care for themselves. This Primer describes some tests that are representative of those currently available and discuss tests that may be introduced in the near future.

Background

Examples of some of the newer home testing products are listed in Table 1. A number of important trends have led to the current plethora of home testing products. Concerns regarding the quality and cost of health care have led many consumers to take a greater interest in their own health and to become more likely to practice preventive care. The home testing products are also attractive to consumers because they can represent a savings in time and expense compared with professional testing. Most of the products are reasonably priced, making them affordable even for older Americans with fixed incomes. However, the most important development has been the recent discovery of monoclonal antibodies and the development of methods for producing them in almost limitless supply. Monoclonal antibodies bind specifically to a single chemical substance and can detect it in extremely small quantities.[6,7] This has enabled manufacturers to develop tests that are inexpensive, relatively easy to perform, reliable, and reproducible. Although not all of the currently available tests are monoclonal antibody testing, most of the ones currently under development do use them.

All home testing products require FDA approval to be marketed to the public. To obtain FDA sanction, the tests must demonstrate accuracy in the 95%-99% range and be safe to use. The tests are subject to the same regulations that apply to commercial laboratories. Manufacturers must also adhere to the same quality-assurance protocols as those for pharmaceutical products.

Pharmacists should have an understanding of some important terminology that applies to home testing products.[8,9] Sensitivity refers to how well the test detects small quantities of the target substance, at a level that permits accurate assessment of the condition. Specificity is a qualitative measurement; that is, the product should not detect substances other than the one being tested for. Accuracy (or precision) is the ability of the test to give reproducible and consistent results. Most tests are accurate in the range of 95%-99%.

A false-positive response occurs when a test result indicates the possible presence of a condi-

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TABLE 1

Selected Newer Home Testing Products

Product	Manufacturer	Approximate Wholesale Price for All Products in Category[a]
Blood Glucose		
BetaScan Trendstrips	Orange Medical Instruments	$25-$37 for 100 strips
Chemstrip bG	Boehringer Mannheim Diagnostics	
Glucostix	Ames Laboratories	
Kyodex Reagent Strips	Kyoto Diagnostics	
Visidex II	Ames Laboratories	
Infections		
Microstix-Nitrite	Ames Laboratories	$2.65 for 3 strips
Occult Blood		
ColoScreen Self-Test	Helena Laboratories	$3.50-$5.25 per test
Detecatest	C.B. Fleet Company	
Early Detect	Warner-Lambert Company	
EZ-Detect	Self Care Systems	
Hemoccult II	Menley and James Laboratories	
Ovulation		
Clearplan Ovulation Predictor	VLI	$31-$35 per test
First Response Ovulation Predictor Test	Tambrands	
OvuSTICK Self-Test	Monoclonal Antibodies	
Ovutime	Ortho Pharmaceutical Corp.	
Q Test for Ovulation Prediction	Becton Dickinson	
Pregnancy		
Advance	Ortho Pharmaceutical Corp.	$9-$10 per test
Answer Plus	Carter Products	
Clearblue	VLI	
e.p.t. Plus	Warner-Lambert Company	
First Response Pregnancy Test	Tambrands	
ptk Plus	Healthcheck	
Q Test for Pregnancy	Becton Dickinson	
Others		
Asthma Alert	Biotrine Corporation	$13.00[b]
Saltex Salt Test	Ames Laboratories	
Sulfitest	Center Laboratories	
Urine Calcium Screening Test	Preventa/Pak	
Visionalysis	Vision Research Institute	$45.00[b]

[a]Sources: *Drug Topics Redbook,* 1987; *American Druggist Bluebook.* 1986-87; manufacturers' advertising.
[b]Retail price.

tion that does not exist. The more sensitive the test, the more likely it is that such a finding will occur. A false-negative response occurs when a test fails to identify a condition that is present. These outcomes are potentially more serious to the consumer than are false-positive outcomes. With home testing products, the majority of false-negative reactions result from carelessness in performing the test.[10] It is the chance that a consumer will obtain a false-positive or false-negative test result at home, and then rely on it as being accurate, that has some health authorities most concerned.

Blood Glucose Tests

The largest category of home testing products is the blood and urine analysis kits for glucose, which are used for diabetes control.[11] This category is expected to expand even more since currently 40% of the 6.5 million known diabetics in America do not test at all, and only 16% test at

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CORRESPONDENCE COURSE

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home.[12]

Only blood glucose tests will be discussed in this section. The advantages of testing blood, rather than urine, for glucose are well recognized (Table 2).[13,14] Numerous studies have confirmed that there is a tenuous relationship between glucose concentration detected in the urine and its actual concentration in the blood.[12,15] Studies have also shown that blood glucose concentrations can be normalized more efficiently by self-monitoring of blood samples instead of urine.

Blood glucose tests are reagent strips impregnated with the enzyme glucose oxidase and a chromogen. Users first wash their hands and then prick the side of a fingertip to obtain a hanging drop of blood. The blood is placed directly on the strip. After a given time (varying with different products), the blood is blotted or washed from the strip and the color that develops is compared with a reference color chart.

Battery-powered meters that read blood glucose values from these test strips were introduced for home use in 1982. They detect light reflected off a colored reagent strip and convert it to an electronic signal. The more intense the color, the stronger the signal. The meter contains a set of calibration values in its memory. The electronic signals are compared with these and converted to numerical values that are read directly on a digital display. These meters are particularly useful to persons with impaired vision and to others who cannot distinguish among colors.

Manufacturers have made it easy for consumers to collect blood samples. A large variety of blood collection aids (Table 3) are available to increase patient convenience and compliance and make the blood collection procedure almost painless.

For home monitoring to be successful, diabetic patients must be motivated, knowledgeable about the disease process of diabetes, and able to comply with all aspects of testing. Since motivation decreases with time, pharmacists can help maintain motivation and maximize diabetes control by showing interest in their patients' needs and discussing test results with them.

Pregnancy Tests

Pregnancy tests are currently the fastest growing segment of the home testing products market.[12] They detect human chorionic gonadotropin in urine. Not normally present in non-gravid women, human chorionic gonadotropin is produced by the human placenta and secreted in urine. Its presence in urine is therefore considered to indicate pregnancy.

The first home test for pregnancy (e.p.t.) was introduced in 1976. It and others that followed shortly relied on the same immunological principle, hemagglutination inhibition. This reaction, however, is extremely sensitive to vibration; the slightest movement of test reagents during the developing stage results in interference with the formation of the characteristic "donut-shaped" ring at the bottom of the test tube, causing the false-negative response reported in most studies and a false-positive outcome in others.[16,17] The earlier tests were also less specific and could detect polypeptides other than human chorionic gonadotropin as well.[16] Some of these first-generation products are still marketed; others have been discontinued. However, the discontinued kits may still be available in community pharmacies, while supplies last.[18]

Most of the testing products listed in Table 1 use highly sensitive monoclonal antibodies. These newer products are easier to use, more accurate, and not susceptible to vibration. The tests are conducted by inserting a dipstick coated with monoclonal antibodies into an early morning urine sample. A positive test result is indicated if the dipstick changes color. Some of these tests may be performed within one day of a missed menstrual period. Results are obtained in 10-120 minutes, depending on the product.

TABLE 2

Advantages of Blood Glucose Testing[a]

Requires less time than testing a double-voided urine sample
Avoids handling urine, which some patients dislike
Test results are quantitative instead of semi-quantitative, as with urine tests
Tests are sensitive for blood glucose concentrations that are below the renal threshold value
Allows for immediate confirmation of hypoglycemic reactions
Identifies fluctuations in blood glucose in response to normal daily activities
Permits quick alteration in treatment without patient being hospitalized
Increases patient compliance with treatment since patients are motivated to be more involved with their treatment

[a]Adapted from Gossel, T.A. Blood glucose self-testing products. *US Pharm.* 1986; 11(Mar):91-6.

Manufacturers of home pregnancy tests claim accuracy rates of 98%-99%.[19] Arends and Uldall[20] report that the accuracy rate of home pregnancy tests is actually lower for first-time users. This observation has been confirmed, and it has also been shown that the accuracy improves with repeated use.[18] Table 4 lists important factors that can interfere with the accuracy of pregnancy testing products. Users should be instructed to retest if they get a negative response but still feel strongly that they are pregnant. A negative response indicates only that human chorionic gonadotropin was not present in the urine in a detectable concentration; it does not necessarily indicate that the woman is not pregnant. Women should also be cautioned to contact a physician any time they get a positive test result. A positive test is a probable, not absolute indicator of pregnancy.

Ovulation Tests

The approximate time of ovulation can be predicted by detecting a preovulation surge of luteinizing hormone (LH) in the urine.[21] LH is normally present in the urine but a sudden increase is seen before ovulation.

The testing products available consist of plastic dipsticks that are coated with monoclonal antibodies specific for LH. Tests are conducted over five to six days in the middle of the menstrual cycle. Test instructions indicate how to determine the initial day for testing. To test for ovulation, the

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TABLE 3

Examples of Blood Collection Devices[a]

Device (Manufacturer)	Design Features
Autolance (Becton Dickinson)	Finger pressure activated; includes five single-use Micro-Fine lancets
Auto-Lancet (Palco Laboratories)	Guard screws to unit; five lancets; two adult guards; one pediatric guard; carrying case
Glucolet (Ames Laboratories)	Two endcaps (regular puncture) and one super-puncture endcap; pen-shaped
Hemalet (Medprobe Orange Medical)	Six lancets and six adult guards; juvenile and pediatric guards available; pen-shaped
Monojector (Monoject)	Six lancets and four caps; puncture depth determined by finger pressure on cap; pen-shaped
Penlet (Lifescan)	Clear guard; puncture depth determined by finger pressure on cap; pen-shaped
Soft Touch (Boehringer Mannheim)	Adult and pediatric platforms; puncture depth determined by finger pressure on cap; pen-shaped; activated at midpoint

TABLE 4

Factors That Interfere with Home Pregnancy Testing Products[a]

Factors Causing False-Positive Responses

- Contamination of urine collection container with soap or detergent residue
- Blood or protein in urine
- Test conducted in cases of missed or incomplete abortion, or in postmenopausal women
- Production of human chorionic gonadotropin by nontrophoblastic tumors (e.g., carcinoma of lung)
- Exogenous administration of human chorionic gonadotropin

Factors Causing False-Negative Responses

- Test conducted too early after the first missed menses or too late in gestation
- Inaccurate timing of reaction
- Presence of contamination in test system
- Deteriorated or outdated reagents
- Chilled reagents or urine
- Test tube and reagents that are jarred during the incubation period, and carbamazepine (for first-generation tests)

[a]Adapted from Gossel TA. Home pregnancy tests. *US Pharm.* 1983; 8(Sep):18-24.

CORRESPONDENCE COURSE

Continued from page 27

dipstick is inserted in an early morning urine sample. It turns blue when the LH concentration suddenly increases. Depending on the product, the positive response indicates that ovulation will follow within 20-44 hours.

Ovulation tests are indicated for use by women who have experienced difficulty in conceiving. By pinpointing the time of ovulation, they can plan for coitus accordingly. Users should be reminded that the time of ovulation can vary each month. The test should therefore be conducted each month the couple attempts to conceive.

The products have also been used by women who want to avoid pregnancy.[22] In this instance, coitus would be avoided, or extra contraceptive precaution taken, during the fertile period. However, pharmacists should stress to women who wish to avoid pregnancy that the kits are not reliable when used for this purpose.[23] Sperm can remain viable for up to 72 hours within the female genital tract. Likewise, an ovum is capable of being fertilized for 24 hours after ovulation.

Pharmacists should advise patients that incomplete mixing or rinsing or inaccurate timing of development may lead to a false-positive reading. Rinsing the dipstick in hot water may cause a false-negative response.

Tests for Urinary-Tract Infection

Tests for urinary tract infections are based on the principle that gram-negative urinary-tract pathogens such as *Escherichia coli* reduce dietary nitrate to nitrite. Nitrite is not normally present in the urine. Since most urinary-tract infections are caused by gram-negative pathogens, the most common types of infections will be revealed; however, infections caused by *Pseudomonas* species or gram-positive organisms will not be detected.

To administer the test, the patient must carefully clean and rinse the urogenital area. A midstream sample of first morning urine is obtained, with care taken not to touch the inside of the collection vessel, and a reagent strip is dipped into the sample. At the acid pH of the strip, nitrite from the urine reacts with *p*-arsanilic acid to form a diazonium compound.[24] This, in turn, couples with the *N*-(1-naphthyl) ethylene-

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diamine contained in the strip. If sufficient bacteria are present, the strip will turn pink within 30 seconds. If the color fails to change within this period, the test result is considered to be negative.

The test must be repeated for three consecutive mornings. Although a color change indicates that nitrite is present, the result is neither qualitative nor quantitative. When three consecutive first morning specimens are positive, there is a 94% chance that an infection is present. A positive response means only that 10^5 or more nitrate-reducing organisms are present per milliliter of urine.[25]

The test is subject to false-positive results. For example, patients should not conduct the test within 10 hours of ingesting 250 mg or more of ascorbic acid, since ascorbic acid reduces nitrate to nitrite. Likewise, ingestion of the urinary analgesic phenazopyridine may impart a red color to the urine, which could turn the reagent strip pink. The incidence of false-negative results is low.

Tests for Fecal Occult Blood

Colorectral cancer is currently the most common visceral malignancy and the second leading cause of cancer-related mortality in the United States.[26] A total of 140,000 new cases will be diagnosed this year, and 60,000 persons will die. According to the American Cancer Society, only 12% of high-risk individuals have been tested for colorectal cancer. More than 90% of the victims would survive five or more years if their conditions were identified before overt symptoms appeared and treatment were started early.[9,27] This first step toward identification can be accomplished easily with home tests designed to identify the presence of fecal occult blood.

The home tests are colorimetric. Most of the available tests use guaiac as the indicator; guaiac contains A-guaiaconic acid, which is oxidized by peroxide in the presence of peroxidase. Because hemoglobin has a peroxidase-like action, a positive test finding indicates that hemoglobin, and thus blood, is present in the stool. The ColoScreen Self-Test uses guaiacol derivatives and a solid oxygen generator. EZ-Detect uses the chromogen tetramethylbenzidine as the indicator.

An important limitation to the tests is their lack of sensitivity. Any food item in the diet that contains peroxidase can cause a positive result. Also, any pathological source of blood (such as anal fissures) or dietary source of blood (such as red meat) will cause a positive test result (Table 5).

TABLE 5

Common Causes of False-Positive and False-Negative Results of Tests for Occult Fecal Blood[a]

Causes of False-Positive Results

- Red meat in the diet
- Peroxidase-rich foods
  - Artichoke
  - Broccoli
  - Cantaloupe
  - Carrot
  - Cauliflower
  - Cucumber
  - Grapefruit
  - Horseradish
  - Mushroom
  - Radish
  - Turnip
- Minor anorectal pathology
  - Fissures
  - Hemorrhoids
  - Proctitis
- Upper gastrointestinal pathology
  - Esophageal varices
  - Gastric malignancy
  - Gastritis from drugs
  - Hiatus hernia
  - Peptic ulcer disease
- Diverticulosis
- Hepatitis
- Nosebleed
- Diarrhea and possibly constipation
- Toilet bowl cleaners (for tests developed in toilet bowl)

Causes of False-Negative Results

- Failure to ingest high-residue diet
- Vitamin C in the diet (more than 250 mg/day)
- Time lag between collection and examination of specimen
- Failure to properly prepare slides or complete tests on three consecutive bowel movements
- Follow-up examination that failed to detect lesion
- Lesion not bleeding at the time of stool collection
- Outdated or deteriorated testing product

[a]Gossel TA. Fecal occult blood teting kits. *US Pharm.* 1984; 9(Feb):10-16.

Fecal occult blood testing has an overall predictive value for colorectal cancer of approximately 50%.[27] This less-than-ideal accuracy rate is nevertheless somewhat better than that achieved by digital examination coupled with procto-

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CORRESPONCE COURSE

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signmoidoscopy. These invasive procedures actually disclose fewer than 50% of colorectal malignancies.

Sales of occult blood testing products have been less than expected, amounting to $600,000 in 1985.[22] The popularity of these tests increased initially after President Reagan's well-publicized colorectal surgery in 1985, but later slumped. One reason for the current lull in popularity is that people are generally not willing to test themselves for the presence of an asymptomatic condition. They may also be afraid to learn that they have colorectal cancer. Moreover, the tests are viewed by many people as being repugnant to perform. Older tests use cardboard slides onto which fecal matter is streaked and then observed for appearance of a color that indicates the presence of hemoglobin. Newer products have made testing more acceptable by minimizing the need to handle stool specimens. For example, one test (Early Detector) uses guaiac-treated tissue paper that is wiped across the anus and then discarded in the toilet, where it is then observed for the appearance of a color change.

Convenience will surely be improved even more in the future, with continued biotechnological advancements. Other tests reported to be in the developing stage will use monoclonal antibodies that will increase the products' reliability. In the meantime, pharmacists can ensure that reliability is maximized by cautioning patients to avoid ingesting red meat and vegetables that contain peroxidase (Table 5) while using the tests. Pharmacists should also discuss the patients' medical history to determine what drugs they are taking or pathology they have that would interfere with testing. If conditions that would increase the error rate of fecal occult blood tests are present, the patient should be advised to discuss the feasibility of testing with a physician.

Asthma

Home monitoring of asthma is made possible by a cylindrical cardboard peak expiratory flow rate whistle.[28] The device has openings along its side that permit the user to determine his or her peak expiratory flow rate (in liters per second) in the normal state when no asthma attack is present. By subsequently covering the openings with tape to the final point where the whistle sound can still be produced, a person can determine his or her forced expiratory pressure. Then, after an event likely to cause an asthmatic response, the affected person blows into the monitor as before. An attack is imminent if the whistle sound that can normally be elicited cannot be produced. The user then knows that he or she should initiate drug therapy, increase the dosage of his or her medication, or seek medical assistance at once, depending on previous instructions from the user's physician. the product's manufacturer claims that the device is simple enough for a four-year-old child to use. Its accuracy is equivalent to that obtained by laboratory pulmonary function test machines.

Other Tests

Sulfite. One-half to one million chronic asthmatics are sensitive to sulfiting agents.[29] Sulfites remain, at the time of preparation of this manuscript, on the FDA's list of food additives generally recognized as safe.

The Sulfitest system consists of reagent strips that can be used to test for the presence of sulfites in food and beverages. A color change indicates a positive test result. In one evaluation of the reagent strips, false-negative results were obtained for five of nine acidic sulfite-containing foods.[30]

Calcium. A product called Urine Calcium Screening Test measures urinary calcium. Women, especially those who are postmenopausal, may be concerned about calcium intake because of potential osteoporosis development. This test is based on the premise that the urinary calcium concentration should be maintained at 100-250 mg/dL to ensure that calcium intake is adequate.

Dietary Salt. A test-strip system to monitor sodium intake is Saltex. Low-sodium diets are commonly prescribed for hypertensive individuals. Urinary sodium concentration reflects the amount of dietary salt ingested. Studies have established that the product is easy to use and reliable.[1]

Vision. An Amsler grid test is available directly from the Minnesota Society for the Prevention of Blindness, St. Paul, MN. The user focuses on a dot in the center of the grid. If any of the lines around the dot disappear or appear distorted, degenerative retinal disease is a possible cause, and the user is advised to consult a physician immediately. Another test, Visionalysis, is a composite of 11 eye tests suitable for all family members.[32] Tests include those for distance, color blindness, depth perception, and dyslexia.

Discontinued Tests

Gonorrhea Test. The product V.D. Alert was a presumptive test for *Neisseria gonorrhoeae* in males. First marketed in 1984, it was the most controversial of all the home testing products.[9] Health authorities feared that since the test guaranteed anonymity, the patient's sexual contacts might remain unreported and, therefore, undetected. The test also failed to identify other sexualy transmitted diseases such as chlamydia and herpes, both of which often accompany gonorrhea.

Gender Test. A product called Gender Choice purported to allow couples to preselect the sex of their offspring. The FDA has ordered that the product be removed from the market.[33] Agency officials stated that gender prediction claims made by the product's manufacturer were not based on scientific data.

Future of Home Testing Products

The future of home testing products seems unlimited. Many commercial tests that are now limited to physicians may soon be approved for home use. These include tests for common sexually transmitted diseases caused by organisms such as *Chlamydia trachomatis* and herpes simplex viruses. Abbott Laboratories hopes soon to market a three-minute test to detect the presence of streptococcal throat infections.[34] Tests to monitor blood concentrations of drugs such as digoxin, phenytoin, and theophylline may also be introduced for home use.[35]

Various home tests for measuring blood concentrations of ethanol and cholesterol as well as blood concentrations of vitamins, minerals, protein, and other nutrients are reported to be in the planning stage. Home tests for detecting cancers of the breast, prostate, colon, and lung are under development, as are tests for leukemia, kidney disease, asthma, childhood meningitis, ulcers, anemia, hepatitis, vision problems, and glaucoma.[34,36-38] Home tests for drug abuse are also being developed.[8] One currently manufactured product, Aware, enables parents to have their children's urine tested for the presence of marijuana, barbiturates, cocaine, and other abused drugs.[39] These urine samples currently must be sent to a laboratory for analysis; however, a home testing version is expected soon, with the retail price projected at about $25.

Microprocessor chips also are being adapted for home testing purposes. One compact, disposable testing unit consisting of a microprocessor chip and single-use battery is reportedly undergoing clinical trials for the detection of strepto-

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coccal throat infections. The patient swabs his or her throat with a cotton-tipped applicator, places the applicator in an incubation tube, pushes a button, and then waits several hours. The unit responds with a blinking light that confirms or denies the presence of a streptococcal infection. Similar technology may be applied to tests for other infections.

Physicians' Concerns about Home Testing Products

Physicians are at odds in their opinions of home testing products. Some practitioners welcome them, saying that home tests get patients more involved in their own health care. Other practitioners are concerned about the availability of home testing products. For example, 75% of general practitioners who responded to one survey indicated that self-diagnosis was undesirable.[9] Opponents iterate that test results can be misinterpreted and that people are not capable of objectively diagnosing themselves. These physicians also fear that many Americans will become too reliant on self-diagnosis and self-treatment.[40]

The manufacturers of home testing products answer that the tests are not intended to replace professional diagnoses.[41] They are designed to be used by people to recognize medical conditions early so that they will then consult a physician. The tests do not provide specific information that can be used without a physician's intervention. Some products are meant to be used to increase compliance with physician-prescribed therapeutic regimens, such as those for diabetes. Manufacturers further explain that the more patients know about their own medical disorders, the better they will comply with therapy.

A medical marketing consultant group has confirmed the manufacturers' viewpoint and reports that home testing products actually do increase visits to physicians.[9] The group's research showed that most people who use home testing products do not regularly consult a physician. In one survey, in fact, over half of the physicians surveyed reported that patients came to them as a result of home testing.[37] Any income the physicians lost because of self-testing was compensated for by revenue derived from other patients who visited them for professional follow-up.

Considerations for Pharmacists

Most home testing products can be used with confidence that they provide accurate results. Available tests contain specific directions for use. But many instructions require professional interpretation if the products are to be used correctly, to maximize accuracy and avoid false-positive and false-negative outcomes. The pivotal issue is that testing procedures must be conducted properly for test results to be reliable. Because professional consultation with users of these products is important for obtaining accurate results, pharmacists must ensure that users understand the procedures involved.

Manufacturers have attempted to describe how their products must be used to ensure accurate test results. To understand some directions, however, users must have a 10th- or 11th-grade education. Therefore, it is probable that some will not completely comprehend the test methodology and not comply with one or more steps in the testing procedure.

Pharmacists should be careful about the terminology they use when discussing the products with patients or physicians. The fecal occult blood tests, for example, are frequently described as being diagnostic for colorectal cancer. They are not diagnostic for cancer and should not be represented as such. Although home testing products can indicate the presence of a certain condition (e.g., the presence of occult blood in stools), they are not intended to determine the cause of the condition. Diagnosis should be left to the physician.

FDA is considering whether there should be changes in the current regulations governing home testing products.[37] These might include new labeling, industry-wide standards of quality for each product, and more intensive clinical study to ensure that the products are effective when used by consumers. Pharmacists may eventually play an expanded role in educating consumers about these products. FDA also is collecting information to determine whether product distribution should be restricted to pharmacies, since sales of these products by nonpharmacy outlets (e.g., supermarkets) are increasing.[42,43]

Conclusion

Home testing products will continue to be developed, using monoclonal antibodies as their basis for detection. Pharmacists can play an important role in ensuring that consumers use these products correctly.

References Available Upon Request.

CE Test on Page 33

LEARNING OBJECTIVES

After studying this article, the reader should be able to

1. Name four trends that have led to the current plethora of home testing products.
2. Describe the mechanisms of tests for blood glucose concentration, pregnancy, ovulation, urinary-tract-infection, fecal occult blood, and asthma.
3. Define the terms sensitivity, specificity, accuracy, false-positive result, and false-negative result as they apply to home testing products.
4. Discuss arguments in favor of and against the availability of home testing products.
5. List five home testing products that are scheduled to be introduced in the future.

CORRESPONDENCE QUIZ
Home Testing Products

For each question there is one best answer only.

1. Which of the following factors has contributed most to the rapid growth of the home testing products market?
   a. Advancements in monoclonal antibody technology.
   b. Increasing emphasis on wellness and self care.
   c. Decreasing costs of test reagents.
   d. Increasing costs of medical care.
2. False-negative test results can most often be attributed to
   a. Use of outdated test reagents.
   b. Contamination of test slide or specimen-collection container.
   c. Failure to perform the test correctly.
   d. Ingestion of food or medications that interfere with the test.
3. Which one of the following statements does *not* represent an advantage of blood glucose testing products over urine testing products?
   a. Blood glucose tests require less time than does testing a double-voided urine sample.
   b. The tests are sensitive for blood glucose concentrations that are below the renal threshold value.
   c. The tests permit immediate confirmation of hypoglycemic reactions.
   d. The test results are qualitative rather than quantitative.
4. Some of the newer home pregnancy tests are preferable to the so-called "first-generation" tests because
   a. They rely on the principle of hemagglutination inhibition, and this reaction is not sensitive to vibration.
   b. They employ monoclonal antibodies that yield more accurate results.
   c. They are designed to make the donut-shaped ring, which indicates a positive test result, easier to view.
   d. All of the above answers are correct.
5. Which one of the following factors would most likely cause a false-positive test response to a home pregnancy test?
   a. Use of chilled test reagents or urine.
   b. Use of deteriorated or outdated test reagents.
   c. Traces of blood or protein in the urine.
   d. Inaccurate timing of reaction.
6. Home ovulation tests detect the presence in urine of a preovulation surge in
   a. Follicle-stimulating hormone.
   b. Human chorionic gonadotropin.
   c. Progesterone.
   d. Luteinizing hormone.
7. Home tests for urinary-tract infections are based on which of the following principles?
   a. Gram-negative organisms reduce dietary nitrate or nitrite that is detectable in urine.
   b. Hemoglobin present in the urine catalyzes the oxidation of alphaguaiaconic acid in the test reagent.
   c. Hemoglobin present in the urine catalyzes the reduction of tetrazolium in the test reagent.
   d. White blood cells present in the urine reduce urinary nitrate or nitrite.
8. Fecal occult blood testing has an overall predictive value for colorectal cancer of approximately
   a. 90%.
   b. 75%.
   c. 50%.
   d. 25%.
9. Which of the following factors is *not* associated with a false-negative response to an occult fecal blood test?
   a. Failure to ingest high-residue diet.
   b. Use of outdated testing materials.
   c. Vitamin C intake greater than 250 mg/day.
   d. Too much red meat in the diet.
10. Which one of the following statements best describes physicians' concerns about the ready availability of home testing products?
    a. The tests provide specific information that precludes the need for physician intervention.
    b. The results of home testing products are easily misinterpreted and there is a great potential for false-negative readings.
    c. Increasing sales of these products by nonpharmacy outlets prevents consumers from consulting a health professional about proper test methods.
    d. The tests represent a substantial loss of physician revenue.

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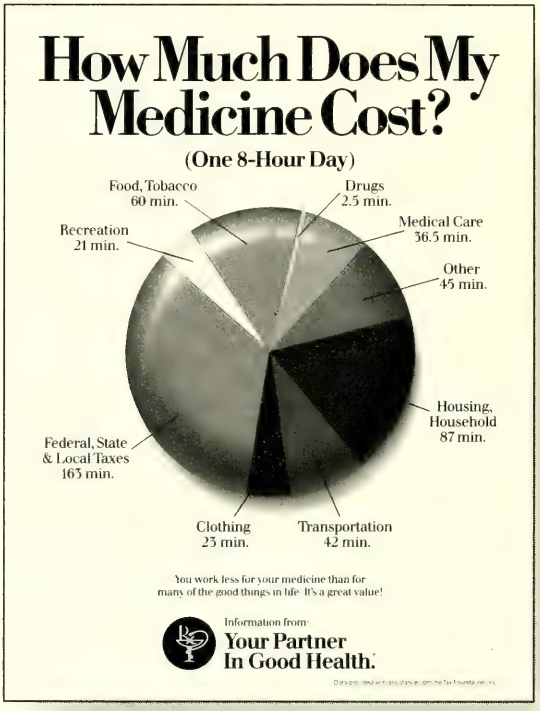
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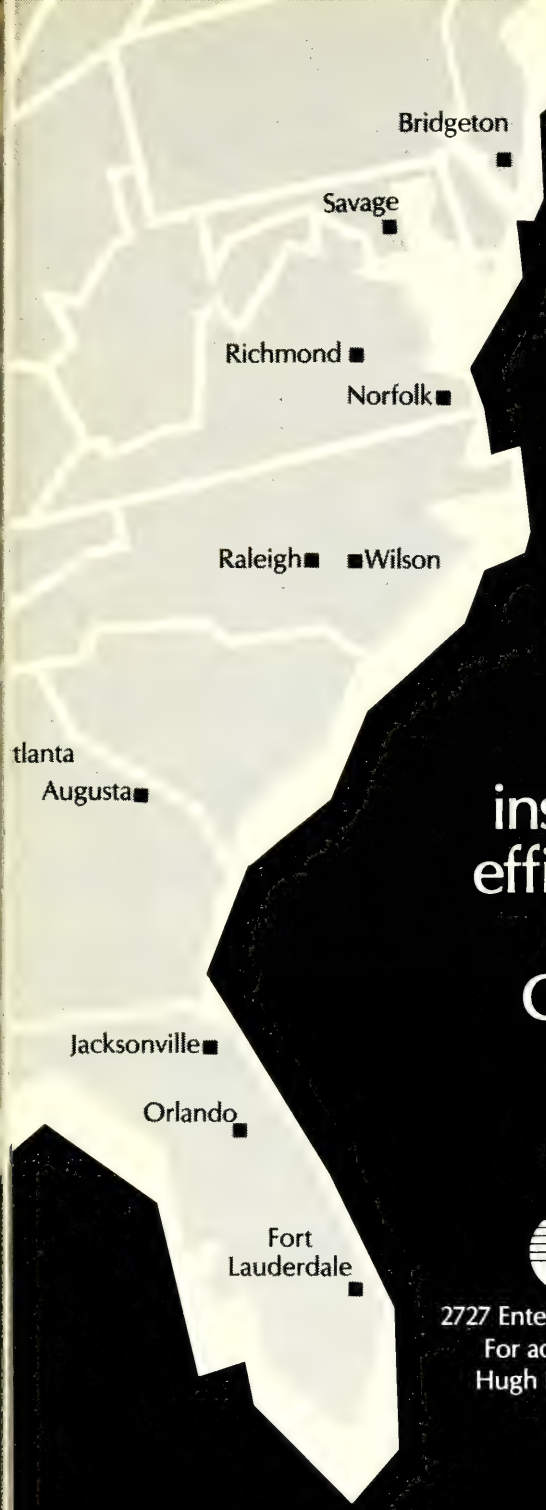

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SEPTEMBER 1988 VOLUME 68 NUMBER 9

UNIVERSITY OF NORTH CAROLINA
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Julian Upchurch, *left,* presents Barney Paul Woodard with the NCPhA Mortar-and-Pestle Award. Story on page 4. Photo by Qualex-Colorcraft

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Barney Paul Woodard — Pharmacist of the Year - 1988

By Mrs. Ed Renfrow (Becky)
(Wife of State Auditor, Ed Renfrow)

Tonight we honor the N.C. Pharmacist of the year.
Donned in Carolina blue, he's the most handsome one here.
His stature is small, but he's sure blazed a trail.
With his many accomplishments kindly let me tell.

When just a young lad he said, "a Pharmacist I'll be."
I'll run the local drug tore in Princeton, you'll see."
A Princeton graduate — he was Chapel Hill bound.
A born Tar Heel — the best could be found.

Pharmacy School, hard work, grades and dates.
But it's beautiful Anne upon which he waits.
Barney says no medicine has lengthened his days.
But only the beautiful organ music that his Anne plays.

Stock to mark, floors to mop, and pills, pills, pills.
Get well cards, Valentine's day, and just lots of thrills.
Hand made sodas and ice cream shakes — he still does make.
There's more than just medical needs for a person's ache.

His four children are here tonight — we'd like you to stand.
B.P. who married Carol is the best architect in the land.
Diane the geneticist, studies the ways of Joy and Mike.
For like their dad, it was pharmacy school, they think alike.

Barney got into politics somewhere along the way.
After twenty years in the House, why he's worked, I'll say.
He's been a good pharmacist and politician too.
For these reasons tonight Barney, we honor you.

Husband, father, professional, the best in the land.
But to us Princeton folks, he's just plain, "The medicine man."
Barney, tonight is your night — let everyone proudly hear.
Barney Paul Woodard is the 1988 Pharmacist of the year.

Carlyle Woodard talks about his Uncle Paul at the Mortar-and-Pestle Dinner. Photo by Qualex-Colorcraft

Barney Paul Woodard Honored at Mortar-and-Pestle Dinner

Marion Suite and Steve Wilson, both of Glaxo, Inc. presenting Barney Paul Woodard with engraved Steuben crystal. Photo by Qualex-Colorcraft.

Barney Paul Woodard, Princeton, was recognized as the 1988 North Carolina **Pharmacist-of-the-Year** at the annual Mortar-and-Pestle Dinner held Friday night, July 29, at the Johnston Community College in Smithfield. Sponsored by the North Carolina Pharmaceutical Association, the Mortar-and-Pestle Award has been given each year since 1948, honoring a pharmacist selected by the Executive Committee of the Association for many years of meritorious service to the profession.

Woodard was acclaimed for his contributions to his community, to public health and welfare and to Pharmacy. A native of Johnston County, he was graduated from the UNC School of Pharmacy in 1938, and is the fourth member of that class of only 22 to be selected as Pharmacist-of-the-Year. The other three are Jimmy Creech, June West and Jean Provo.

NCPhA President Albert F. Lockamy, Jr., served as master of ceremonies for the evening program which followed the buffet dinner prepared by Baxley's Food Service of Raleigh. Program participants included the Reverend John Roberts, pastor of the United Methodist Church of Princeton, who gave the invocation; Norman Denning, Chairman of the Johnston County Board of County Commissioners, who officially welcomed the more than 230 friends, relatives, neighbors and colleagues of Mr. Woodard from across the state; and the five men who spoke about Woodard from their varied perspectives and experiences with him. The award was presented by immediate past president of the NCPhA Julian E. Upchurch.

Dr. Donnie H. Jones, Jr., a family physician from Princeton, has known Barney Paul for forty-two years, coming to the town after World War II. Woodard was one of the first people he met and Dr. Jones commented that Barney Paul has been a man of compassion for as long as the two have been friends. Many night he has called Barney to come to the drug store for an emergency prescription, but noted Dr. Jones, he doesn't have to call him as often now, since Woodard seems to be working late into the night on third party paper work.

State Senator Robert D. Warren, who has served with Woodard in the General Assembly for several years, described him as a person of faith, optimism, practicality, and an effective and widely respected legislator. Senator Warren illustrated each virtue with a story. He read a letter of congratulations from Speaker of the House Liston B. Ramsey.

Carl R. Gurley, Sr., who grew up with Woodard in Princeton, recalled how when they "played store" as boys, Woodard was always the proprietor and wound up with all the money. He lived within three blocks of the Woodard family and noted that Barney Paul always took part in everything going on in the town. He was truly a community-oriented person.

Carlyle Woodard, nephew of the award recipient, is also a pharmacist and has worked in Woodard's Pharmacy since 1966, when he came for a couple of years to help Barney Paul who had been elected to the state legislature. "Uncle Paul has been like a father to me," said Carlyle, "and it's fun to see him talk to the computer when he's working." He read a poem written by Becky Renfrow, wife of State Auditor Ed Renfrow.

The final speaker was H. Martin Lancaster, 3rd District Congressman, from Goldsboro, who also served with Woodard in the General Assembly. They had been friends since 1960. Barney Paul had helped Lancaster learn the ropes in his early days in the legislature (1979), since Woodard had considerably more experience.

A walnut Mortar and Pestle, made by pharmacist and craftsman Millard Denson of Burlington, was presented to Woodard by Jimmy Creech on behalf of the Johnston County Pharmaceutical Association.

Marion Suite, Glaxo, Inc., gave Mr. Woodard an engraved piece of of Steuben crystal and announced that Glaxo was donating five thousand dollars to the Consolidated Student Loan Fund of the NCPhA in his honor.

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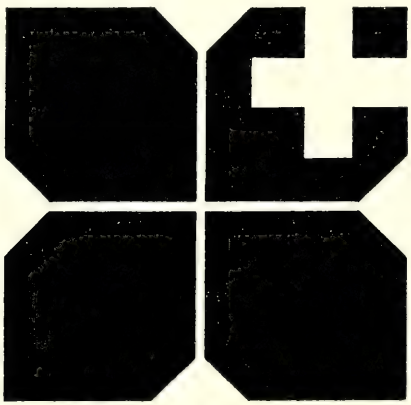

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continued from page 13

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continued on page 18

A NEW H_2 Antagonist

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Lilly

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AXID®
nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

Eli Lilly and Company
Indianapolis, Indiana
46285

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continued from page 15

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continued from page 19

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LETTER TO THE EDITOR

Mr. Al Mebane
NC Pharmaceutical Association
P.O. Box 151
Chapel Hill, NC 27514

Dear Al,

There has been much discussion and confusion since PCS has begun to force stores to install the capability to verify eligibility and submit claims electronically. PN/NC is concerned about these demands being placed on pharmacies in North Carolina and has been working for over a year to identify options and recommend the best course of action. The following is an explanation of our position.

We felt that it was unreasonable to ask a pharmacy to install more than one "box" or to enter claims both into the "box" and then into their pharmacy computer. We identified two companies, Smith Data Corporation and General Computer Corporation, who had developed "boxes" that would submit claims to multiple data processors and would work either as a "stand alone" if a store did not have a computer or could be connected to a pharmacy computer and act as a modem if a pharmacy had a computer. We know that there is no technological reason that either of the options we recommended would not work. We were informed by PCS that both the Smith and GCC systems were approved for use for PCS claims through a pharmacy computer and the Smith "box" was approved for use if a store did not have a computer.

Thus, we thought that pharmacies who had a computer could work with their software vendor to install either system or make the necessary software changes to go computer to computer and not be forced to install a "box". Stores without a computer could install the Smith "box". With any of the above options the pharmacy would install only one "box" since both the Smith and GCC boxes will submit claims to many data processors and computerized stores could avoid the double data entry problem.

PCS reversed its position on approval of the Smith "box" as a stand alone and stores without a computer have no option but to install the RECAP "box" and a "box" for every data processor who demands claims submission via telephone. Computerized stores can work with their software vendor to develop the ability to go computer to computer or install either the Smith "box" or GCC "box". If the software vendor will not support this change then the store has to install multiple boxes and enter data twice.

I hope that this clarifies the activities, concerns and position of PN/NC on claim capture via telephone. We believe that electronic claims capture is the way of the future. Every store should develop a plan for installing this equipment and be prepared to submit claims to multiple payors.

PN/NC will continue to work to protect pharmacy in North Carolina and to address all issues of common concern.

Sincerely,
Andrew Barrett
Executive Director
Pharmacy Network of North Carolina

NCPhA 1988-89 Election Results

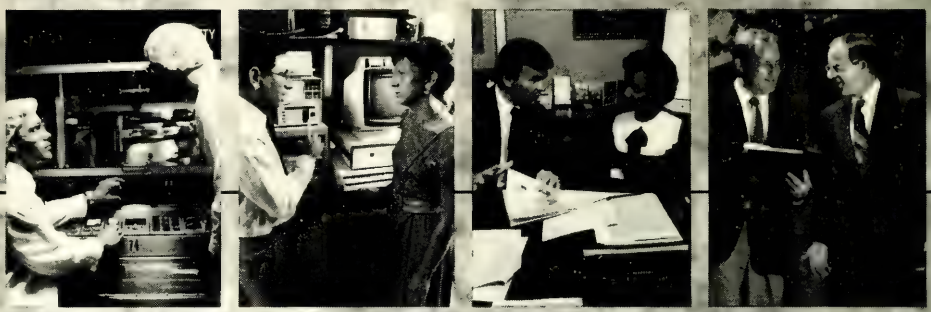
The NCPhA Committee met on August 3, 1988, at the Institute of Pharmacy in Chapel Hill to open and tally the ballots from the mail election for the 1988-89 NCPhA Executive Committee and Board of Directors of the Pharmacy Foundation of North Carolina, Inc. Overall, the races were unusually close! The results are:

Executive Committee
First Vice President (President Elect)
J. Frank Burton, Greensboro
Second Vice President
Betty H. Dennis, Carrboro
Third Vice President
Stephen C. Dedrick, Durham
Executive Committee (one term)
J. Robert Bowers, Bethel
W.P. O'Neal, Belhaven
Laura McLeod Vance, Winston Salem

Board of Directors of the Pharmacy Foundation of NC
Paul B. Bissette, Jr., Wilson
James L. Creech, Smithfield
Mitchel W. Watts, Kannapolis
William H. Wilson, Raleigh

The successful candidates will be installed in their respective offices at the 1989 NCPhA Annual Convention in North Myrtle Beach, S.C., May 17-21, 1989. Each candidate will serve as prescribed by the Constitution and Bylaws of the NCPhA.

Election committee members present to count the ballots and certify the election results were: Robert B. Smith, June McDermott, LeRoy Werley, Jr., and E.A. Brecht.



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June A. Walega
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WHOM TO CONTACT?

If you or your students would like additional information concerning careers in federal pharmacy, the following individuals are considered the senior pharmacists or pharmacy consultants to their respective services. Feel free to contact them with specific questions. In addition, each of the agencies has specific recruiting programs and can usually provide a speaker for "Career Days" or for a pharmacy practice course.

Federal Pharmacy Specialty Advisors

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Pharmacy Consultant
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Department of the Army
Washington, DC 20310-2300
703/756-0151

AIR FORCE:

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Chief Pharmacy Officer
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CALENDAR OF EVENTS

October 5-6, 1988 — NCSHP Fall Seminar, Greensboro, NC

October 9-13, 1988 — NARD 90th Annual Convention, Atlanta, GA

October 9-15, 1988 — North Carolina Pharmacy Week

October 22, 1988 — UNC School of Pharmacy Alumni Day

October 22-26, 1988 — NWDA Annual Meeting, Maui, Hawaii

October 23, 1988 — NCPhA Executive Committee Meeting

October 27, 1988 — NCPhA Woman's Auxiliary Fall Convocation

November 5, 1988 — NCPhA Endowment Fund Dinner, Kenan Center

November 9-13, 1988 — ASCP Annual Meeting, Las Vegas

November 14, 1988 — Board of Pharmacy Reciprocity Examination

December 4-8, 1988 — ASHP Midyear Clinical Meeting, Dallas, TX

January 7, 1989 — Campbell University School of Pharmacy spring classes begin

January 17, 1989 — UNC-CH School of Pharmacy spring classes begin

January 23-24, 1989 — Board of Pharmacy Licensure Examination

February 2-3, 1989 — NCSHP Winter Meeting, High Point, NC

February 10-12, 1989 — Pharmacy Leadership Forum, Southern Pines, NC

February 23, 1989 — NCPhA Socioeconomic Seminar, Greensboro, NC

March 19-25, 1989 — National Poison Prevention Week

April 8-13, 1989 — APhA Annual Meeting, Anaheim, CA

May 17, 1989 — NCSHP/NCPhA Management Seminar, North Myrtle Beach, SC

May 17-21, 1989 — NCPhA Annual Convention, North Myrtle Beach, SC

June 4-8, 1989 — ASHP Annual Meeting, Nashville, TN

Welcome New Members!

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Donna J. Harris, Raleigh
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PHARMPAC COMMITTEE REPORT

The North Carolina Pharmacy Political Action Committee (PharmPac) conducted their annual meeting during breakfast on May 20, 1988, at The Grove Park Inn, Asheville, NC during the North Carolina Pharmaceutical Association Convention.

The meeting was called to order by committee Chairman, Jimmy S. Jackson. The Invocation was given by Representative Barney Paul Woodard.

Minutes of the 1987 Annual Meeting in Charlotte, NC were read by Jack G. Watts, Executive Secretary and Treasurer, followed by his Secretary-Treasurer's Report. Contributions to candidates for state office were reported by the Secretary-Treasurer. Fifty-five candidates received contributions from PharmPac.

A Legislative Update was given by Jimmy Jackson, Executive Director of NCPhA, Al Mebane, and lobbyist, Virgil McBride.

Josiah "Joe" R. Whitehead, Director of Governmental Affairs, Burroughs-Wellcome, gave an update on the Catastrophic Health Plan.

Whit Moose commented on bills in congress that pharmacists should be aware of, specifically, HR 2168, Physician Dispensing Bill. Moose asked each pharmacist to write his/her congressman about this bill.

The results of the election officers were reported as follows:

Jimmie S. Jackson, Chairman
Jack G. Watts, Secretary-Treasurer

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Submitted by,
Jack G. Watts, Sec-Treas

NORTH CAROLINA PHARMACY POLITICAL ACTION COMMITTEE

North Carolina PharmPac - Treasurer's Report
April 23, 1987 - May 17, 1988

BALANCE ON HAND APRIL 23, 1987 (LAST YEAR'S REPORT)	$20,729.72
RECEIPTS:	
CONTRIBUTIONS FROM MEMBERSHIP (4/23/87 - 5/4/88)	$7,574.50
TOTAL RECEIPTS	$ 7,574.50
DISBURSEMENTS:	
DONATIONS FOR CANDIDATES (55)	$5,700.00
EXPENSES OF THE EXECUTIVE SECRETARY	740.00
LUNCH - DIRECTORS	36.91
POSTAGE	1.67
BULK MAILOUT	572.50
SECRETARIAL WORK	175.00
NCPhA EXPENSES	500.00
COPIES - COPYTRON	32.51
U.S. POST MASTER - BULK MAIL PERMIT	50.00
ADAM'S MARK HOTEL, CHARLOTTE ROOM AND DINNER 1987 SPEAKER	86.65
TOTAL DISBURSEMENTS	$ 7,895.24
BALANCE ON HAND MAY 17, 1988	$20,408.98

September, 1988

DICKINSON'S PHARMACY

By Jim Dickinson

Dispensing physicians. What happened? Just a few short years ago, everything seemed headed in the right direction.

Physician-pharmacist dialogs were improving, we felt the younger physicians had benefited from a certain integration of educational environments with pharmacy and other health professions students, pharmacists were no longer hopelessly subservient to "King Prescriber," and mutual respect was growing.

The patient was sure to be the ultimate winner.

Where did it all go? Many on both sides of the prescription pad are asking that question, and the asking stirs accusations — but very few answers.

Let's review some of them. Pharmacists in California started it by pressing for limited prescribing functions in the middle 70s. Physicians started it by putting pharmacy's professional aspirations down. Physicians should not have supported anti-substitution laws. Pharmacists should not have supported generics. Pharmacy schools should not have pumped too many new pharmacists into the market-place. Medical schools should not have done the same with physicians. Florida pharmacists drove the last nail in the coffin by instigating the first prescribing law for pharmacists. Physicians drove the last nail in when they embraced dispensing for profit. . . .

Who knows where it really began, and does it really matter?

Perhaps we should step back a few yards from this slugfest and try to see it from the ultimate referee's point of view — the patient.

Patients probably are not sufficiently sophisticated, or interested, now to cast a vote that means anything. But because they are the sole reason that we have physicians or pharmacists to begin with, you can be sure that they will eventually vote on these interprofessional squabbles.

So what is in the best interests of the patient?

This should be the simplest of all questions, but when it is asked, all we can hear is a babble of self-interests.

Uninformed theorists and fanatics at the Federal Trade Commission, for instance, contend that uninformed consumers should be free to shop for their health needs from the widest possible range of choices, guided only by the din of unfettered free enterprise. This is the self-interest of political grandstanders speaking.

Semi-informed financial opportunists who used to be sell-anything entrepreneurs, now specializing in custom pharmaceutical kits for physicians, contend that uninformed consumers should place all of their reliance on the prescriber, foregoing pharmaceutical checks-and-balances. This is the self-interest of the quick-buck artist speaking.

Incompletely informed and professionally forgetful physicians, meeting as the American Medical Association in Atlanta in December, voted to acknowledge mail-order prescriptions as a safe and established alternative distribution system. They do this citing security studies done in the 1970s, when there were no for-profit mail-order pharmacies. This is the self-interest of vengeful combatants, stung by critics of their "right" to dispense, speaking.

So what is the patient's interest?

It's sad that in this cacophony of self-interests we should have to ask, and that here will be disagreements based on self-interest when answers are given.

Try this definition of the patient's interest: *The patient is entitled to conscientious, competent "hands-on" care by health professionals with the fullest personal training and experience in the care being given.*

Notice that money is not mentioned. That is because the care comes first, and the money second.

Notice that convenience is not mentioned, either. That, too, is because the care comes first, and the convenience second.

It may well be that the interprofessional bitterness we're hearing comes from too many actors participating in the patient's ignorance, from too many people profiting from patients not yet knowing what they're missing.

But that can't go on forever. Patients will find out. And when they do, the warring health professions may find out that patients are ignorant about something else — the supposed value of professional turf.

They won't care who is the boss, who is subservient to whom, or what professional dignities were affronted when one party did something the other didn't like.

All the patient is interested in is knowing that the care they got was the best available. Often, that is as much a perception as a reality. It used to be called "bedside manner."

Aging Americans, who buy the most health

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DICKINSON'S PHARMACY

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care, remember those days. A powerful and growing majority, if they perceive themselves to be getting less care than they need from the health care system, they will force the issue with blunt instruments like lawsuits and legislation.

Against dispensing physicians, one such blunt instrument is the Wyden bill, H.R. 2186, which has now drawn the endorsement of the National Council of Senior Citizens because of the clear conflict of interest that dispensing physicians have.

Seniors can already see that pharmacists should stick to traditional pharmacy, and physicians to traditional medicine. Others will catch on, too.

It's the patient who's boss.

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsibility for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

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Write or call
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(see congressmen on page 24)

re: HB2168
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Continued from page 29

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BLOOPERS & BLEEPERS . . . In our 1988 June issue, Cliford R. Guy was incorrectly identified as Clifford R. Gray in the photo that accompanied the article, "Internship Program Established," on page 10.

CORRESPONDENCE COURSE
ADVISING CONSUMERS ON OTC COLD REMEDIES

by Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology and Toxicology
Ohio Northern University, Ada, OH
and
J. Richard Wuest, R.Ph., Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to:

1. review the etiology, course of events, and symptoms associated with the common cold;
2. discuss current trends in treating symptoms of the common cold with OTC products.

Objectives

At the conclusion of this lesson, the participant will be able to:

1. discuss specific pathogens, viral and bacterial, known to cause the common cold;
2. list the ingredients of OTC products specifically intended to treat cold symptoms, and state their pharmacologic actions;
3. differentiate a cold from influenza, based on reported symptoms; and
4. demonstrate the ability to choose important advice to give consumers purchasing an OTC cold remedy.

Introduction

Americans reportedly suffer from common colds more frequently than from any other ailment. It is estimated that they experience over 500 million colds per year.

Pharmacists are often called upon to provide information and answer questions about this malady, as well as recommend OTC remedies to treat its various symptoms (see Table 1).

While there is not yet a cure for the common cold, considerable research has been conducted and new data are constantly published. Many of the "tried and true" remedies of years past are effective, while others have been shown to be irrational, ineffective, and, in some cases, potentially toxic.

This article reviews current knowledge concerning the etiology of the common cold. The findings of the FDA/OTC advisory panel on self-treatment of cold symptoms will be discussed. Also, the distinction between colds and influenza, another common respiratory ailment, will be made. Consumer counseling for adults and children will be presented.

TABLE 1
Sales Volume For OTC Cough/Cold Remedies in Millions of Dollars

Remedies	$ (millions)
Cough/Cold Tablets and Capsules	569
Cough/Cold Remedies	371
Cough Drops/Lozenges	210
Nasal Sprays	111
Allergy/Hay Fever and Asthma Products	108
Sinus Remedies	70
Topical Ointments	46
Nose Drops	27
Room Sprays	11

Adapted from: *Drug Topics,* July, 1984

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in the service of pharmacy

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CORRESPONDENCE COURSE

Continued from page 31

The Common Cold

Generally, as people age, they experience fewer colds. Pre-schoolers develop 6 to 12 colds per year on the average, and school-aged children experience approximately 6 colds yearly. By age 40, the number declines to 1.7; by age 60, to 1.3 colds per year. This decline can be explained by understanding the body's immunological system.

Since colds are viral-induced, the body needs time to develop its immunological defenses against these viruses. With time, the immunologic system is usually able to stop the progression of a cold infection before it develops into a full-blown syndrome.

It is sometimes difficult to differentiate cold symptoms from other respiratory tract infections. For example, persons over the age of 60 experience many respiratory tract infections that resemble the common cold. Many of these afflictions are related to allergy or to bacterial or other infections of the respiratory tract. Therefore, it is difficult to determine whether the individual will respond to OTC medications.

Under the age of 3, boys develop colds more frequently than girls. After that, the ratio changes in favor of the girls. This may be due to the fact that females, as young mothers, spend more time with their youngsters than fathers. Women are, therefore, exposed to more cold viruses because of the many colds children develop and because colds are highly contagious.

While the common cold may occur during any season, there are three primary periods in which colds predominate: early autumn following the re-opening of school, shortly after mid-winter, and early spring. The first season is related to the large number of children coming together and interacting after being separated for several months. The latter two seasons are related to fluctuating environmental temperatures.

Interestingly, the incidence of colds is not increased by damp, chilly weather. Individuals residing in large urban areas typically experience a greater number of respiratory illnesses than their counterparts from more rural areas.

Cold Viruses

More than 125 viruses have been identified as causes of the common cold. The major group is the *rhinoviruses*, of which over 75 are known to be pathogenically important. Other viruses include the *adenoviruses, coxsackieviruses* and *echoviruses*. These, plus other viruses, are responsible for over 95 percent of all colds.

Cold viruses, like other viruses, are composed of a single strand of ribonucleic acid (RNA) which is surrounded by a protein/lipid shell. The invading virus first binds to susceptible cells, then penetrates inwardly. Within 4 to 5 hours of entry, the virus commandeers the cells' genetic coding system, and replicates their own RNA strands rather than those of the host. Within 16 to 18 hours of infection, protein components of the virus also replicate. By this time, completely duplicated virus can be detected within the cell. The cell then bursts, releasing virus into the surrounding area. Contagious cells are contaminated and the process repeats resulting in further viral replication and cell destruction. Meanwhile, histamine and the other chemical mediators of inflammation are released from the disrupted cells, and various symptoms of the common cold appear.

Cold viruses are extremely contagious. Although they are readily acquired by inhaling airborne particles, the major spread of colds is now believed to be due to touching contaminated objects such as doorknobs, telephones, or the affected person himself. Once the virus is on the hands, touching the eye or nose, or other mucous membrane results in autoinnoculation.

Cold viruses are reported to retain virility for several hours when left on inanimate objects. Obviously, pharmacists are at high risk of developing colds from viruses brought into the pharmacy by infected patients.

Colds not directly related to viral contamination are caused by bacterial invasion. The most commonly encountered bacterial species include the streptococci such as *S. pyogenes*. A bacterial cause should be suspected whenever symptoms persist beyond 7 to 10 days of onset. Fever, if present, should recede within 3 to 4 days. Whenever symptoms last longer than these periods, medical attention should be sought.

A number of respiratory afflictions induce symptoms similar to those of the common cold. These include influenza, allergic rhinitis, and streptococcal pharyngitis. It may be difficult to distinguish between causes of symptoms, especially those produced by influenza.

Table 2 differentiates cold and flu symptoms. Allergic rhinitis ("summer cold") is seasonal and related to certain plant growing periods. Streptococcal pharyngitis ("strep throat") is associated with sore, swollen lymph nodes in the neck, and an extremely sore throat.

TABLE 2
Is It A Cold Or The Flu?

Symptoms	Cold	Flu
Fever	Rare	Characteristic; high (102-104°F); sudden onset; lasts 3-4 days.
Headache	Rare	Prominent
General aches & pains	Slight	Usual; often quite severe.
Fatigue & weakness	Quite mild	Extreme; can last up to 2-3 weeks.
Prostration	Never	Early & prominent.
Runny, stuffy nose	Common	Sometimes
Sneezing	Usual	Sometimes
Sore throat	Common	Sometimes
Chest discomfort, cough	Mild to moderate; hacking cough	Common; can become severe.

Treatment of the Common Cold

There is a wide variety of OTC products intended to treat cold symptoms. While the common cold is the most prevalent of all illnesses, there is no known method to prevent or cure it. Rather, treatment is intended to alleviate symptoms until the body's defense mechanisms can restore the patient to normal health. These remedies contain ingredients intended to treat specific symptoms noted in Table 3.

Pharmacists should determine which specific symptoms are present before recommending a product which contains only those ingredients which are actually indicated. The old-time "shotgun" approach to treating the common cold is no longer considered effective therapeutics because it exposes the patient to unnecessary side effects.

Analgesics/Antipyretics. Aspirin, acetaminophen, and most recently, ibuprofen, are effective analgesic/antipyretic medications used to treat aches, pains, and fever associated with the common cold. Aspirin and acetaminophen are qualitatively and quantitatively similar.

Ibuprofen is qualitatively similar to others; some studies have shown that it is quantitatively superior. A 200 mg dose of ibuprofen provides equivalent pain/fever relief as 650 mg of aspirin or acetaminophen.

The use of these drugs to provide relief of aches and pains associated with the common cold is not associated with known therapeutic problems. However, there is some controversy regarding whether or not a fever, which is at least partly responsible for the aches and pains, should be resolved.

Fever is one of the body's normal defense mechanisms. Virus multiplies maximally at a normal body temperature. Whenever this increases, viral replication is checked. There is rarely medical significance resulting from a temporary increase of a few degrees of body temperature.

TABLE 3
Eight Basic Symptoms Associated with the Common Cold

	Treatment
1. Cough	C
2. Fever	A
3. Headache	A
4. Itchy, watery eyes	B
5. Muscle aches & pains	A
6. Nasal congestion	D
7. Runny nose	B
8. Sore throat	A, E

The above can be alleviated by:
A. Analgesics
B. Antihistamines
C. Antitussives
D. Decongestants
E. Local Anesthetics

On the other hand, feverishness contributes to muscular aches and pains and the general discomfort of the common cold. Barring other contraindicating factors, there is little reason for a cold sufferer to avoid taking an analgesic/antipyretic. But whenever the temperature persists or worsens, the individual should seek medical attention.

Reye's Syndrome, a rapidly developing course of hepatic failure and encephalopathy, has been linked with the use of aspirin in children experiencing the onset of flu-like symptoms. Although there is much controversy surrounding the findings, it is recommended that aspirin not be given to children when an influenza infection is sus-

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CORRESPONDENCE COURSE

Continued from page 33

pected. Reye's Syndrome has a 30 percent mortality rate.

Decongestants. Decongestants provide the basis for relief of symptoms of stuffy nose and respiratory congestion. Pharmacologically, they are sympathomimetic amines which reverse vasodilation brought about by histamine and other chemicals which cause nasal stuffiness. Because the vasodilation of vessels within the nasal mucosa reduces the size of air passages, vasoconstriction can reduce exudation of fluid into the nasal area. They also help alleviate symptoms of runny nose.

Decongestants may be applied topically or taken orally. Orally ingested, systemic products are promoted to provide decongestant action throughout all parts of the nasal pharyngeal and sinus mucosal areas. Systemic drugs require a longer period to act because they must dissociate from their oral dosage forms before being absorbed into the blood. However, their action is claimed to be more prolonged compared to topical decongestant dosage forms. Also, systemic medications may produce systemic effects which are rare following use of topical decongestants when they are used correctly.

Topical decongestants provide prompt vasoconstriction of only those tissues upon which they are applied. When excessive topical solutions is placed in the nose, it may drain into the stomach, and eventually be absorbed.

The ingredients listed in Table 4 have been shown by the FDA/OTC advisory panel to be safe and effective for self-medication of nasal congestion. OTC products containing these ingredients can be assuredly recommended for this use.

Antihistamines. Antihistamines are often included in OTC cold products. However, they are not generally effective in alleviating symptoms of the common cold except for rhinitis, lacrimation (watery eyes), and sneezing.

To be maximally effective, antihistamines must be taken prior to onset of histamine-induced inflammatory reactions. Therefore, patients taking antihistamine-containing products for relief of symptoms listed above should be instructed to take the medication at the first appearance of cold symptoms.

Antihistamines possess anticholinergic activity. Reported benefit from antihistamines may be related at least partially to this activity. The FDA/OTC advisory panel that reviewed anticholinergic drugs *per se* did not approve any of these ingredients for Category I (safe and effective for OTC use) status for OTC cold remedy products.

TABLE 4
Safe and Effective Nasal Decongestants For OTC Use

Decongestant/Dose or Conc.	Form
Ephedrine preparations (hydrochloride, sulfate); Racephedrine hydrochloride, l-deoxyephedrine, 0.5%	Topical
Naphazoline hydrochloride, 0.025-0.05%	Topical
Oxymetazoline hydrochloride, 0.025-0.05%	Topical
Phenylephrine hydrochloride, 0.125-1.0%	Topical
Phenylpropanolamine preparations (bitartrate, hydrochloride, maleate), 6.25-25 mg (SA 75mg)	Oral
Propylhexedrine, deliver 0.4-0.5 mg in each inspired breath	Topical
Pseudoephedrine preparations (hydrochloride, sulfate), 30-60 mg (SA 120 mg)	Oral
Xylometazoline hydrochloride, 0.05-0.1%	Topical

Anticholinergics are not considered to be safe for self-use in doses that are effective. Most manufacturers of OTC cold remedies have already removed anticholinergic ingredients from their products; others will do so soon. Because antihistamines have anticholinergic activity, patients for whom anticholinergic drugs would normally be contraindicated (i.e., persons with an inflammed prostate, glaucoma, or asthma) should not take products containing antihistamines with out first checking with a doctor.

Antitussives/Expectorants. Productive and non-productive coughing are symptoms of the common cold. Both have individual characteristics, different pathology, and are treated differently.

Fads. A fad is an unproven event postulated to achieve a goal that is accepted with enthusiastic zeal. Fads come and go. Preventing and/or treating the common cold with megadoses of Vitamin C was a fad that persisted for more than a decade.

The use of **zinc gluconate** lozenges is a new fad in the treatment of the common cold. A limited number of reports that have appeared in the medical literature over the past several years have shown that zinc seems to inhibit replication of upper respiratory tract viruses. This allows the body's normal defense mechanisms to rid the body of these pathogens.

Specifically, cold symptoms are reportedly checked when a zinc gluconate tablet or lozenge is dissolved in the mouth every hour for up to four doses. Dosing must begin at the first appearance of symptoms.

Other supposedly acceptable forms of zinc include the aspartate and ascorbate salts. Zinc is released into the mouth and absorbed across the oral mucosa where it reaches tissues and blood levels in the upper respiratory tract.

Although the philosophy of the zinc fad has some pharmacological merit, there is little current evidence that it actually causes relief of symptoms. However, this therapy is not harmful. Pharmacists should instruct consumers to discontinue treatment if symptoms worsen or persist after the specified self-medicating period.

Consumer Advice

The common cold is among the most common of all human diseases. But there are no effective methods to either prevent or cure it. Available treatments are directed toward alleviating the following symptoms: headache, muscle ache, nasal congestion, postnasal drip, sneezing, cough, watery eyes, and occasionally fever. These symptoms are checked until the body's natural defense mechanisms can restore the patient to normal health.

Symptoms that occur more often than normal or persist longer than 7 to 10 days, 3 days for fever, may signal the presence of a disease state other than the common cold. The pharmacist should question the patient in an attempt to rule out other causes.

Drug Interactions. Pharmacists should be alerted to potential drug interactions that may result when OTC cold medications are taken. A potentially dangerous interaction exists between sympathomimetic amines and monoamine oxidase inhibitors (e.g., Eutonyl, Marplan). The latter can severely potentiate the former's action leading to hypertensive crisis and even death. Concurrent use is contraindicated. A warning to this effect appears on the labeling of OTC *systemic* decongestants and in the professional labeling of MAO inhibitors. *Topical* decongestants can be used safely with MAO inhibitors.

Antihistamines can potentiate other CNS depressants including alcohol. Individuals taking antihistamines should be especially careful when driving or drinking alcoholic beverages. Antihistamines can exert additive anticholinergic effects with other drugs of this category. Monoamine oxidase inhibitors can prolong and intensify both the CNS depressant and anticholinergic effects of antihistamines.

Humidity. Respiratory infections are intensified in dry environments. Symptoms such as coughing and nasal congestion will be more intense. Pharmacists should urge individuals with recurrent upper respiratory tract infections to purchase and use a vaporizer or humidifier.

Cold sufferers should be reminded to eat well and get plenty of sleep. Good nutrition and adequate rest help the body's defense mechanisms to shorten the course of an infection. Drinking 8 or more glassfuls of liquid each day will keep respiratory mucous membranes moist. These measures should hasten resolution of symptoms.

CORRESPONDENCE COURSE QUIZ

COLD REMEDIES

1. There is controversy as to whether cold sufferers should take a drug to alleviate which of the following symptoms?
   a. Mild fever
   b. Productive cough
   c. Runny nose
   d. Sore throat
2. Due to the anticholinergic effects of antihistamines, consumers should be advised to consult with their physician before self-medicating with them if they have which one of the following conditions?
   a. Diabetes
   b. Hypertension
   c. Glaucoma
   d. Heart disease
3. The drug interaction that occurs between sympathomimetics and monoamine oxidase inhibitors reportedly results in:
   a. hypertensive crisis
   b. liver damage
   c. pseudomembranous colitis
   d. severe CNS depression

continued on page 36

CORRESPONDENCE QUIZ

Continued from page 35

4. Which of the following times of year is NOT one of the three primary periods in which colds predominate?
   a. Spring
   b. Summer
   c. Autumn
   d. Winter
5. While all of the OTC analgesics are considered to be qualitatively similar, which one provides its therapeutic effect in the lowest dosage strength?
   a. Acetaminophen
   b. Aspirin
   c. Ibuprofen
6. The major group of cold-causing viruses is the:
   a. adenoviruses
   b. coxsackieviruses
   c. echoviruses
   d. rhinoviruses
7. Pharmacologically, the nasal decongestants are members of which of the following groups?
   a. Antihistamines
   b. Sympathomimetics
   c. Anticholinergics
   d. Xanthines
8. The zinc salt that is purported to confer beneficial effects in persons with colds when it is allowed to dissolve from its lozenge dosage form is:
   a. zinc gluconate
   b. zinc oxide
   c. zinc sulfide
   d. zinc stearate
9. Rhinitis is best relieved by taking a(n):
   a. analgesic
   b. antihistamine
   c. expectorant
   d. sympathomimetic
10. The most commonly encountered bacterial species that causes cold-like symptoms is the:
    a. adenococci
    b. pneumococci
    c. rhinococci
    d. streptococci

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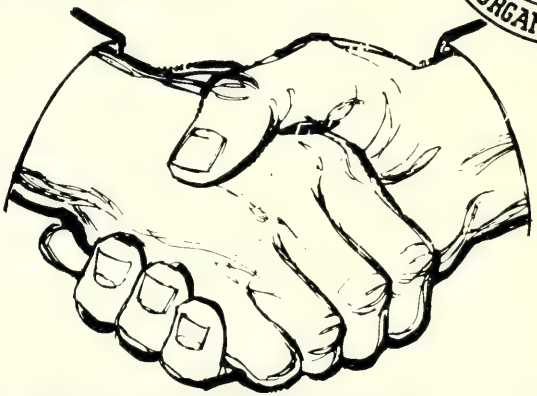

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The P.L.A.N. database contains information on more than 3,000 ongoing live and home study programs. Pharmacists may access the service free of charge by telephone and discuss their specific learning needs with a professional staff member who will conduct a computer search of continuing pharmaceutical education programs by a variety of descriptors based on the individual's request. Descriptors available to search the database include general topic, clinical specialties, disease states, drugs, practice environments, dates and location of live programs, and the amount of credit offered. An individualized summary report of courses which meet the individual caller's specific needs will be mailed on request.

The P.L.A.N. service may be accessed Monday through Friday from 9:00 a.m. to 4:00 p.m. central time by dialing **1-800-533-3606**.

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For more information or for application materials, contact the Non-Residential Programs Office, Department of Health Policy and Administration, School of Public Health, CB# 7400 Rosenau Hall, Chapel Hill, N.C., 27599 or call (919)-966-1451.

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DIRECTOR OF PHARMACY: Pungo District Hospital in Belhaven, NC 27810. Pungo District Hospital has immediate opening for position of Director of Pharmacy. Salary negotiable and commensurate with experience. Interested parties should contact the administration of Pungo District Hospital by sending current resume to the following address: Pungo District Hospital, 210 Front Street, Belhaven, NC 27810, Attn: Dan White, Administrator.

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continued on page 42

CLASSIFIED ADS

Continued from page 41

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continued on page 44

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Continued from page 43

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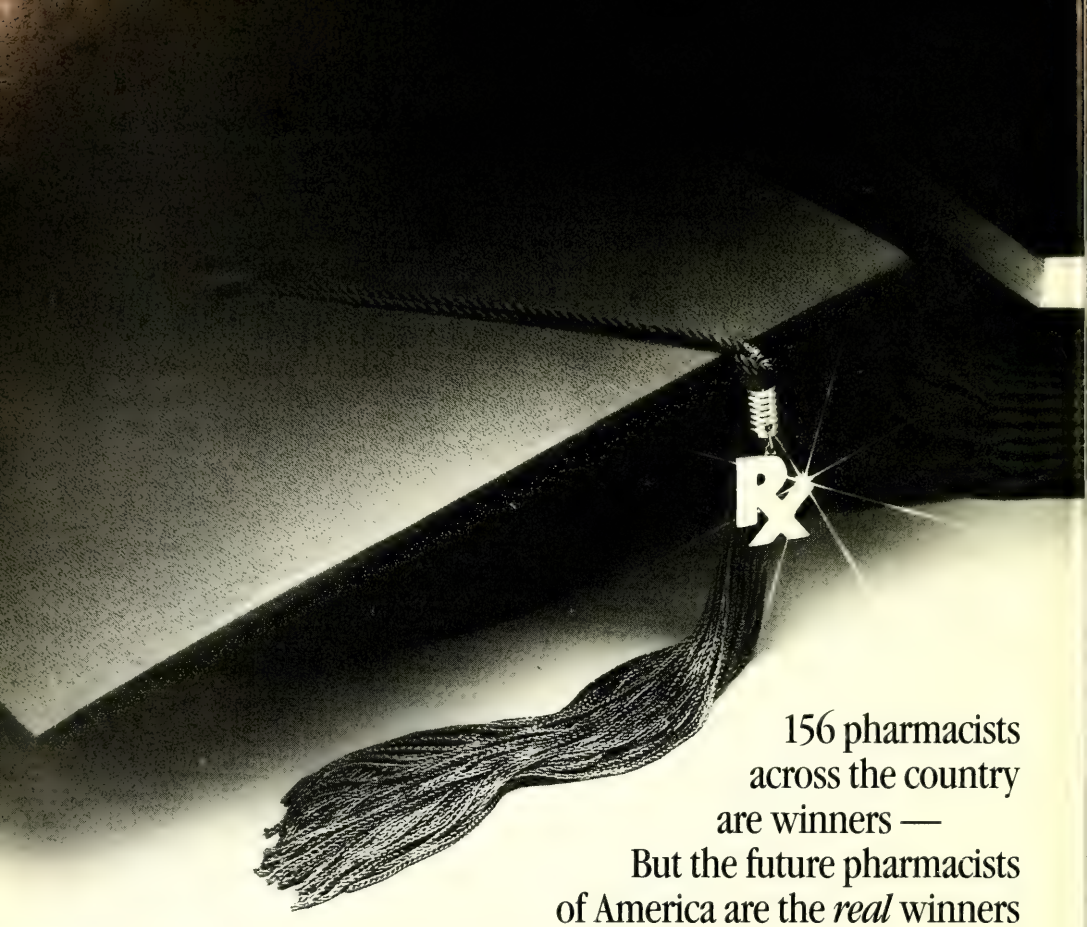

156 pharmacists across the country are winners — But the future pharmacists of America are the *real* winners

During this past summer, pharmacists from across the United States and Puerto Rico were invited to enter a drawing to support pharmacy education. ☐ For every winning entry — 156 in all — Burroughs Wellcome Co. pledged to donate a $500.00 scholarship to a pharmacy school and a matching $500 grant to one of six national pharmacy associations of the winner's choice. ☐ To everyone who entered the drawing, thank you very much. And to the following winners, our most sincere congratulations:

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PRESIDENT'S REMARKS

"Beginning with this issue of our journal, I would like to restart our tradition of including commentary from the President in the monthly journals. I shall call this the "President's Remarks". I hope you find this worthwhile and informative."

In general, summer is traditionally a sluggish period in our annual business cycle. Many of us take advantage of this slow season by spending more time with our families and enjoying restful days at the beach. Summer, however, was not a time of inactivity for your president.

MAY

My official term as your president began in May with my installation at the 10th Annual NCPhA Convention. Four hundred eleven registrants convened at the Grove Park Inn in the beautiful mountainous Asheville, North Carolina. It was an exciting convention as well as a successful one.

JUNE

On June 12th I was proud to represent my profession as "Tar Heel of the Week" in *The Raleigh News and Observer.* A large part of my discussion with the reporter centered around how I viewed my role as a pharmacist in the delivery of health care. I stated that the pharmacist is a gateway to the health care system.

In today's society we play an important role as a health educator. Because of our unique position in the health care system, it is the pharmacist who can educate our customers on the proper use of medications and advise them on home health care, such as self-administered home tests. Since health care is being directed more towards self-care and the number of patients who want to be educated about their medications is increasing, it is more important than ever to talk regularly with our patients. In fact, The National Council on Patient Information and Education (NCPIE) emphasizes this message through the slogan, "Communicate Before You Medicate," chosen for their 1988 medication awareness campaign.

On June 22nd I attended the 1st Annual NCPhA Leadership Workshop for Association officers and Committee chairmen at the Institute of Pharmacy. The workshop, an outgrowth of a study sponsored by Glaxo, was designed to take an indepth look at the entire pharmacy profession at all levels. Results of the study indicated that the place to impact pharmacy was at the state association level. With this in mind, study researchers, John Machowiak and Fred Eckel, determined that a workshop directed towards developing state association leaders would be a good place to start. Consequently, John and Fred designed a workshop focusing on the leadership structure and the overall process and outcomes of NCPhA. All in attendance found the workshop very beneficial and it was recommended that NCPhA continue the workshop annually.

I was also invited to attend the annual convention of the South Carolina Pharmacists Association with my wife, Ginger, at Hilton Head Island. In the relaxed, beachy atmosphere ideas were easily exchanged within the meetings by day and during the beach

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PRESIDENT'S REMARKS

Continued from page 5

parties at night. Besides leaving with lots of ideas for our own forthcoming convention at Myrtle Beach in May of 1989 our relationship with our South Carolina counterpart was also strengthened.

JULY

During the month of July, the Association held its annual Pharmacist of the Year Dinner in Johnston County to honor Barney Paul Woodard. I was delighted with the large attendance. Barney Paul has done much for our association during his many years as a practicing community pharmacist and active legislator. He presents a challenge to all pharmacists to be involved in all aspects of our profession.

I would like to express my thanks to all who attended the Pharmacist of the Year Dinner. I hope to see such large attendance and support at other meetings this year.

AUGUST

Late in August our Executive Director, Al Mebane, President-Elect, Ralph Ashworth, and I, accompanied by our wives, journeyed to Savannah, Georgia for the Southeastern Pharmaceutical Association Conference. The Conference began a day early with the Leadership Workshop presented by John Mackowiak and Fred Eckel who were soliciting a critical review of their program from association officers throughout the Southeast. John and Fred would like to develop the Leadership Workshop into a nationwide program to include all state pharmacy associations. Once again, the Leadership Workshop was well received by all.

SEPTEMBER

In September, I was invited to participate in the opening convocation at Campbell University School of Pharmacy. It was a privilege to represent NCPhA at this important ceremonial assembly. One hundred eighty students, the total now currently enrolled in the pharmacy school, were in attendance.

I was also invited to do a television interview (which I graciously accepted) with WRAL's "Medical Beat" reporter, Denice Boyer. We discussed the proper use of acetaminophen and asp'rin. Again, I emphasized the important role we pharmacists play in advising our patients on the proper use of their medications.

Now that Fall is upon us, I am busy preparing for our 1988 Pharmacy Week. I hope to report on our successes surrounding this event in next month's issue.

Albert "Al" F. Lockamy Jr., R.Ph.
President

Cover: At a recent award ceremony in Washington, D.C., Surgeon General C. Everett Koop (left) is pictured presenting Commander Steven R. Moore the Public Health Service Commendation Medal. Moore is a 1970 graduate of the UNC School of Pharmacy and until recently was assigned to the Food and Drug Administration. Currently, Moore is serving as Associate Chief of Staff in the Office of the Surgeon General.

SCHERING REPORT IX — THE FORGETFUL PATIENT:
The High Cost of Improper Patient Compliance

Almost ten years ago, Schering Laboratories inaugurated an ongoing series of research studies designed to explore many of the major issues affecting the profession of pharmacy.

Schering Report IX defines the dimensions of the phenomenon known as improper patient compliance:

- When and how it occurs.
- Its costs, in patients' health, as well as in dollars.
- What pharmacists can do to reduce its incidence.

The data come from a national survey of 2,000 representative consumers conducted by an independent research organization under Schering's sponsorship.

What Is Improper Patient Complaince?

Once the patient receives a prescription from the physician during an office visit, there are three major areas for improper compliance.

1. The patient gets a prescription from the doctor but does not have the prescription filled.
2. The patient does not take the medication as directed.
3. The patient does not have the prescription refilled although he or she as been instructed to do so.

We can learn how to improve patient compliance by examining (1) the reasons patients give for improper complaince, and (2) the demographic characteristics of the most frequent offenders.

Who Pays the Costs of Improper Compliance

We all acknowledge that improper compliance is medically unsound. At the same time, there is a cost to our society (1) in billions of dollars, and (2) in non-monetary costs such as poor health and even death. Who pays?

1. **The Patient** — It has been estimated that 125,000 Americans die each year simply because they fail to take their medicine as prescribed. At the same time, hundreds of thousands of hospitalizations are loaded onto our medical costs. The economic costs include 20 million lost workdays a year, or about 1.5 billion dollars in lost earnings.

2. **The Physician** — When patients forget to take the medicine, neglect instructions, cut off medications prematurely, or don't take it at all, the doctor's effectiveness is impeded. The course of treatment is confused and the doctor's time is wasted. This represents a vast sum loaded onto our medical system.

3. **The Pharmacist** — Unfilled and unrefilled prescriptions add up to a loss of 100 million prescriptions a year. Valued at about twelve dollars each, this projects out to an astounding 1.2 billion dollars.

Who Gets an Rx from the Doctor?

Before looking at which patients commit one of the three cardinal sins of improper compliance, it is useful to look at the characteristics of the patients who were given a prescription during their most recent visit to a doctor. Overall, 54% of all patients seeing a doctor got a prescription, but there were some distinct differences. For example:

Unfilled and unrefilled prescriptions add up to a loss of 100 million prescriptions a year . . . this projects out to an astounding 1.2 billion dollars.

Reason for Visit — Of those getting a routine checkup, only 35% got a prescription. The rate was higher among patients with an ongoing problem (61%) and those with a new problem (74%).

Education — Sixty-five percent of those with some high school or less education received a prescription, compared to only 45% of college graduates.

Occupation — Blue collar workers received a prescription on 59% of their visits, but patients in professional and managerial occupations got one only on 47% of their visits.

Income — Of patients with annual incomes under $15,000, 62% got a prescription, compared to only 50% of those with annual incomes greater than $15,000.

Type of Doctor — Osteopaths and family practitioners are the most frequent prescribers, while orthopedists, urologists and obstetrician/gynecologists are among the least frequent.

How Do They Pick A Pharmacy To Fill That Prescription?

Most consumers live and work in areas where they can choose from among several pharmacies. To find out why they choose one over another

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SCHERING REPORT

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when it's time to fill a prescription, we asked them to choose from the following list the most important reason for selecting the pharmacy in which they had their most recent prescription filled:

Reason for Choosing a Pharmacy

- Convenience of location
- Convenient store hours
- Delivery service is available
- Parking is available
- Pharmacist is friendly and courteous
- Pharmacist conducts himself as a professional
- Pharmacist available to give advice on use of my prescriptions
- Pharmacist is knowledgeable about prescription drugs
- Pharmacy charges fair prices
- Pharmacy always has new prescription products available
- Promptness in filling prescriptions
- Store is neat and clean

Here are the reasons consumers gave, in order of importance, for choosing their pharmacy. Convenience of location led the list, with 73% of prescription-fillers saying it's important. Here's how the whole list was ranked in importance.

1. Convenience of location
2. Pharmacy charges fair prices
3. Pharmacist is friendly and courteous
4. Promptness in filling prescriptions
5. Convenient stores hours
6. Parking is available
7. Pharmacist is knowledgeable about prescription drugs
8. Store is neat and clean
9. Pharmacist conducts himself as a professional
10. Pharmacist available to give advice on use of my prescriptions
11. Pharmacy always has new prescription products available
12. Delivery service is available

Significantly, four of the factors deal directly with the person who actually fills those prescriptions in the pharmacy — the pharmacist:

	% Rating Important
Pharmacist is friendly and courteous	27%
Pharmacist is very knowledgeable about prescription drugs	20%
Pharmacist conducts self as a professional	16%
Pharmacist is available to give advice on use of my prescription	16%

This is an acknowledgement of the degree to which pharmacy — perhaps more than any other kind of retailing — is a people business.

In the pharmacist they trust.

Loyalty Follows Trust

Once patients find a pharmacy that fulfills their requirements, they're likely to remain loyal to it, as 86% usually fill their prescription at the same pharmacy every time.

Some reasons the other 14% give for straying:

- One of the pharmacies is near my place of work.
- One of the pharmacies is near my doctor's office.
- One of the pharmacies charges less for prescriptions.
- One of the pharmacies is open longer hours.
- One of the pharmacies sometimes does not stock the medicine I need.

The Three Faces of Poor Compliance

Unfortunately not all patients who have their prescriptions filled take the medication as directed, or have it refilled as called for. Following is a look at which patients are most subject to each of the three forms of improper compliance.

I — The Patient Gets a Prescription from the Doctor but does not have the Prescription Filled.

Among the 54% of all patients who received a prescription from the doctor, 93% had their prescription filled, while 7% did *not* have that prescription filled.

Here are the reasons they gave for not having their prescriptions filled:

- I felt better after the visit.
- I had some of the medicine at home.
- I don't like to take medicine.
- The doctor gave me a complimentary sample.
- The doctor gave me the medicine.

Who were the most frequent offenders?

Age — Only 5% of those 40 or older neglected to have their prescriptions filled, but the rate doubled to 10% among patients under 30.

Education — Ten percent of college graduates (who would be expected to know better) failed to have their prescriptions filled, compared to only 4 percent of those who did not graduate from high school.

Number of Daily Medications — Compliance, somewhat surprisingly, appears to increase with the number of medications taken daily. Ninety-seven percent of those who already take two or three other medications got their new prescriptions filled.

The survey also took a deeper look into two of the reasons patients gave for not having their prescriptions filled: The doctor gave them (1) a full course of the actual medication, or (2) a complimentary sample.

Physicians Dispensed Medicine — Some 8% of patients said they were given a full supply of medicine by their doctor during the visit, thus eliminating the need for a prescription. About half of this group reported they paid the doctor directly for that medicine.

Physicians Gave Samples — A starter sample was received by 9% of patients.

Who Got Samples

- Patients with a new problem or an existing condition were three times as likely (12%) to receive a sample as those getting a routine checkup (4%).
- Type of illness also influenced the incidence of sample distribution, with patients with the following ailments most often receiving samples: gastrointestinal problems, metabolic problems, asthma, genito/urinary problems, ear/nose/throat ailments, infectious diseases, and dermatological problems.

What Do Patients Think of Samples?

Beneficial	69%
Not beneficial	8%
Neither beneficial nor harmful	7%
No opinion	16%

Why Do Most Patients Like Samples?

Here are the reasons patients cite for their favorable rating of samples:

- The sample was a convenient way of starting therapy promptly.
- The sample gave me an opportunity to see how well the medication works.
- The sample let me find out if the medicine agrees with me.
- The medicine provided me with immediate relief of pain.
- The few samples I got helped to reduce the drug costs when I got my prescription filled.

II — The Patient Does Not Take the Medication as Directed

Some patients don't take as much of the medication as directed, some may not remember how often to take it, and some may not continue to take the medicine for as long as directed.

Patient compliance with the medication regimen depends, in large measure, on how well the professional health-care provider — the physician and the pharmacist — *communicates* with the patient. We asked our 2,000 patients whether they remembered receiving instructions from their doctor or pharmacist.

Instructions on Dosage (How Much to Take)

From the physician	92%
At the pharmacy	43%
Independent pharmacy	52%
Chain/supermarket pharmacy	35%
By the pharmacist	59%
By the clerk	21%

Instructions on Frequency (How Often to Take)

From the physician	92%
At the pharmacy	40%
Independent pharmacy	47%
Chain/supermarket pharmacy	34%
By the pharmacist	57%
By the clerk	18%

Instructions on Taking Medication Full Length of Time

From the physician	87%
At the pharmacy	36%
Independent pharmacy	43%
Chain/supermarket pharmacy	28%
By the pharmacist	48%
By the clerk	19%

Who Stops the Medication Too Soon?

A substantial 15% of patients admit to having stopped taking their medication prematurely. The most frequent offenders were:

- Younger adults
- Better educated patients
- Those living in large urban areas
- Those with a new medical problem

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SCHERING REPORT

Continued from page 9

Unexpectedly, we found that this form of noncompliance drops as the number of medications taken daily rises:

- When no other medication is taken daily, 17% of patients stop taking the medicine prematurely.
- When one other medication is taken daily, 16% stop too soon. The rate falls to 6% for those with two other medications and to only 4% for those with three or more other medications daily.

This suggests that compliance is, to some degree, a learned skill. Presumably those who take several medications daily have learned the value of following directions and letting the medication help the way it's supposed to.

Why Do Patients Stop Taking Their Medications Too Soon?

The overwhelming majority (70%) say they stopped taking their medication earlier than directed because they felt better, the health problem no longer bothered them. Some other reasons:

- 10% said they didn't feel any better after taking the medication.
- 9% reported that they had side effects.
- 8% said the medication made them feel worse.

III — The Patient does not have the prescription refilled although he or she has been instructed to do so

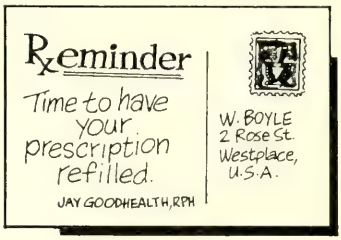
It appears that getting a patient to the pharmacy to fill the initial prescription is much easier than getting his or her back there to refill it. While only 7% of our patients who got prescriptions did not have them filled, 32%, or fully one third of those who were told by their doctors to have their prescriptions refilled, failed to do so.

Half of all patients (50%) report they were given instructions by their doctors to have their prescriptions refilled. (Let's presume that the other half did not need refills either because of the nature of the illness, the type of treatment, or for reasons related to the medication itself.)

Instructions on Refills

How often were instructions on refills given at the pharmacy?

At the pharmacy	20%
Independent pharmacy	22%
Chain/supermarket pharmacy	17%
By the pharmacist	27%
By the clerk	10%



Refill Reminders

Even if pateints don't get advice on refills when they pick up the medicine, there's a chance for the pharmacist to contact them later with a follow-up reminder. How often does this happen?

Of our 2000 patients, only *one in a hundred* received such a reminder. But follow-up could be improved, and patients helped, if pharmacists set up some workable system to remind a patient when it's time to have a prescription refilled.

The patient will appreciate the reminder and the patient will recognize that the pharmacist is a caring professional who is deeply concerned with the patient's health.

How can pharmacists fight improper compliance?

The three major forms of poor compliance have been demonstrated to occur at unacceptably high levels:

- 7% of patients don't have prescriptions filled.
- 15% don't take the medication for the full designated time.
- 32% don't get refills, even though they need to do so.

Pharmacists are in a unique position to help lower these rates in the following ways:

☑ Provide More Information and Services

When asked how pharmacists could improve patients' knowledge about the medicines they're taking, here's what patients said they're looking for:

- 43% want more information on the medication itself. That includes mentions of side effects as well as an explanation of what the drug is.
- 19% want more information on dosage, both how much and how it should be taken.
- 19% want more prompt service, especially getting their prescriptions filled promptly.

☑ Meet the Patients Face-to-Face

One reason why pharmacies may be contributing to patient noncompliance is that pharmacists themselves deal face-to-face with their patient-customer only 56% of the time.

In light of the great weight we observed that is given to *professionalism* and *knowledge* of the pharmacist, this level must be increased. Patients need the counsel of pharmacists at the moment when many experience anxiety and stress — the moment when the actual medication is received and the therapy is about to begin.

More pharmacist-patient contact is imperative. The high priority patients place on *friendliness* doesn't mean just smiling from behind the counter.

. . . improper compliance is a phenomenon that's fueled by what we ***don't*** *do, rather than by what we* ***do.***

☑ Stress the Basics

Covering the four basics every time a patient is given a prescription is a potent tool against improper compliance. The pharmacy should discuss:

- Dosage
- Frequency
  Length of time to be taken
- Number of refills

In addition to the basics, two important additions that interest patients are:

- Possible side effects.
- Whether medicine should or should not be taken with foods and liquids.

☑ Improve Training of Clerks

In everyday practice, the pharmacist's workload is often too heavy to deal directly with every patient. That's why the pharmacist must constantly review with clerks the importance of covering the basics when handing over a prescription to patients.

The clerk must also be taught to identify patients who are in genuine need of consultation with the pharmacist, and then to ask the pharmacist to come out to speak to that patient.

☑ Follow Up On Refills

Only one in one hundred pharmacists now actually take the time to follow up with their patients on refills. We believe that patients will appreciate your thoughtfulness, your caring, and your professionalism when you remind them to have their prescriptions refilled.

Time For A New Commitment

Poor patient compliance is everybody's problem — doctors' pharmacists' and pharmaceutical companies' — the traditional collaborators in helping to improve health care.

Our survey strongly suggests that improper compliance is a phenomenon that's fueled by what we *don't* do, rather than by what we *do.* So let's renew our commitment to assuring that those who need our medications not only receive them, but also receive all the counsel they need to assure the medications are taken correctly. It's a big step toward helping those medicines do their work more effectively, and thus help improve the health of your patients.

This report was presented by Jack L. Richardson, Director of Pharmacy Relations, Schering Laboratories at the 108th Annual NCPhA Convention, Asheville, NC, May 18-21, 1988.

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*Wiggins, Steven N. "The Cost of Developing a New Drug." Pharmaceutical Manufacturers Association, Washington, D.C., June 1987.

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NCPhA STAFF PROFILES

Alfred "Al" H. Mebane, III

Mr. Mebane is our Executive Director of the North Carolina Pharmaceutical Association. He first joined the Association in 1978, succeeding his predecessor, W.J. Smith, of 38 years.

Mr. Mebane is responsible for carrying out the direction of the Executive Committee, such as policy and programs, proposals of the NCPhA Committees (as approved by the Executive Committee), and proposals of Association members through convention activities. In short, he is the cement and glue that holds the Association operations together.

In his 10 years as Executive Director, Mr. Mebane has automated Association headquarters to improve office management, implemented an up-to-date telephone system, including the addition of a toll-free number, and has taken on staff responsibilities acting as headquarters for the North Carolina Society of Hospital Pharmacists.

Changes that Mr. Mebane has witnessed over the years are a membership that has almost doubled in size, insurance programs which have increased in complexity, a demand for member services that has intensified with the growth in membership, and opportunities for Association invovlement have amplified with the opening of the Campbell University School of Pharmacy.

Before accepting the position of Executive Director for the Association Al Mebane managed a drug store for a number of years in Greensboro and became the owner of Elm Street Pharmacy in Greensboro. Al is also a graduate of the UNC School of Pharmacy.

Al's interest in peole sparked his involvement in the community of Chapel Hill when he first moved to Chapel Hill 10 years ago. Since then, Al has become a member of the Rotary Club, a deacon for the University Presbyterian Church and Chairman of the Human Services Advisory Board of Chapel Hill. At one time, he even ran for a position on the Chapel Hill City Council.

Mr. Mebane sports a variety of hobbies and claims to be a "hobby collector." Among his many hobbies are stamp collecting, photography, ham radio, magic, and computers. He also enjoys any noncontact sport, such as, golf, tennis, and softball.

Betsy Mebane

Betsy is wife of our Executive Director, Mr. Alfred "Al" H. Mebane, III. She moved to Chapel Hill from Greensboro, N.C. to join her husband at the association in 1978. Prior to her move, she helped her husband in their drug store and taught school in the Greensboro city school system. A graduate of the UNC at Greensboro, Betsy received her A.B. degree in Elementary Education.

At association headquarters, Betsy is the Administrator of the Consolidated Pharmacy Student Loan Fund and manages the Jefferson Pilot group health insurance for association

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STAFF PROFILES

Continued from page 13

members. She also serves as bookkeeper and helps coordinate the Annual NCPhA Convention in addition to coordinating the many other NCPhA functions throughout the year. Presently, she is preparing for the Endowment Fund Dinner which is to be held on November 5, 1988, at the Kenan Center in Chapel Hill.

She and Al have 3 children, Holt, Ann, and Alex and two grandchildren, David, 7 months of age and Katelyn, 10 months.

Betsy, also, has devoted much of her spare time to the NCPhA Woman's Auxiliary throughout the years. She has served in many offices on the State and local level, including past president of the Greensboro and Chapel Hill auxiliary groups. Betsy is currently the State Coordinator for the NCPhA Woman's Auxiliary.

Her pastime pleasures include tennis, needlework, and crafts. In recent years, Betsy has become an avid golf spectator as her daughter, Ann, is married to PGA golfer, Bobby Clampett. Betsy is also a member of the DAR and active in the church choir at the University Presbyterian Church in Chapel Hill.

Erie Cocolas

Erie holds the record for having the longest employment history among current staff members at the NCPhA. She has worked at the NCPhA headquarters since 1975.

Erie is NCPhA's "official greeter" as she cheerfully greets incoming visitors from her front desk "office." Besides assisting visitors, Erie maintains the membership roster, which includes processing address changes and annual membership statements. Her other duties involve assisting with the NCPhA Annual Convention, preparing the NCPhA's Woman's Auxiliary newsletter, "Doings," and performing a sundry of additional miscellaneous projects. Erie's latest project involves transferring NCPhA's membership files to an automated database on her new MacIntosh computer!

Erie is married to Dr. George H. Cocolas, Associate Dean of Student Affairs for the UNC-CH School of Pharmacy. They have four children, Kathy, Harry, Theadora, and Anthony and one grandchild, Evan, age 7, son of Kathy and her husband Andy. Harry, the eldest son has decided to follow in his father's footsteps by pursuing a doctorate degree in pharmacy. He is currently studying Industrial Pharmacy at Rutgers School of Pharmacy in New Jersey. He is also a UNC-CH School of Pharmacy graduate.

Kathryn Jefferson

Kathryn joined the NCPhA staff in May as the new Managing Editor for The Carolina Journal of Pharmacy. She moved to Raleigh last year from Dallas, Texas where she lived for four years while her husband, Jay Jefferson, completed a residency in Oral and Maxillofacial Surgery at Parkland Memorial Hospital. Although Kathryn is originally from Kentucky, she and her husband

have decided to make North Carolina their permanent home. Kathryn is a graduate of the University of Kentucky School of Pharmcy.

Kathryn's fall project at the Association is to develop a new membership brochure for the NCPhA. This fall, she will also be starting the Masters in Pharmacy Practice program at the UNC School of Pharmacy.

She enjoys reading, shopping, tennis, aerobics, jogging, cycling, any water sport, and the arts.

Terri Little

Terri is the newest member of the NCPhA staff having joined the staff in mid-August.

She will be in charge of processing the monthly CE tests from the journal and CE certificates, handling classified ads for the monthly journal and digest, managing the NCSHP membership roster and the Washington National Disability Insurance for our members.

Terri is married to Jimmy Little and they have two children, Candance, four years old, and Phil two years. Originally from Burlington, Terri and her family now reside in Graham, N.C.

Terri enjoys cooking and reading although Terri asserts that her free time is limited being a working mother with two young children!

NEW

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An Introduction

Editors
Abraham G. Hartzema, Ph.D., M.S.P.H.
Miquel S. Porta, M.D., M.P.H.
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Cary, NC
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Carol McCullen, ph-mgr.

Kerr Drugs
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Marianne Phillips Hall, ph-mgr.

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STATE BOARD

Continued from page 17

Permits Issued 8/15/88 (continued)

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The Medicine Shoppe (T/O)
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Nashville Drug Co., Inc. (T/O)
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Alicia S. Anderson, ph-mgr.

Open Door Medical Clinic (LSP)
211 South Person St.
Raleigh, NC
Vallie Telfer, ph-mgr.

WINSTON SALEM PHARMACIST RECEIVES NORTH CAROLINA PHARMACY AWARD

Laura McLeod Vance has been named the 1988 Distinguished Young Pharmacist of the Year in North Carolina. The award was conferred on the 30-year-old Winston Salem pharmacist at the recent annual meeting of the North Carolina Pharmaceutical Association.

Vance is a pharmacist at Winston-Salem Health Care Pharmacy, where she has worked for the past two years. She graduated from the University of North Carolina at Chapel Hill in 1981.

The award, sponsored by Marion Laboratories, Inc., a Kansas City, Mo., pharmaceutical company, is presented annually to a young pharmacist in each state for individual excellence and outstanding contributions in state pharmacy association activities, community affairs and in professional practice.

***Past Pharmacists of the Year in attendance at the Mortar and Pestle Dinner* honoring Pharmacist of the Year — 1988, Barney Paul Woodard, on July 29, 1988. From left, (first row), B.R. Ward, John C. Hood, Jr., Ralph P. Rogers, Jr., Barney Paul Woodard, Rheta E. Skolaut, June Bush West, James L. Creech, (second row), Jack G. Watts, J.C. Jackson, Jean Bush Provo, John T. Henley, Milton W. Skolaut, and William L. Randall.**

PHARMACISTS OF THE YEAR

Previous Winners of the Mortar-and-Pestle Award**

1948 Edward W. O'Hanlon, Winston-Salem*
1949 Clyde Eubanks, Chapel Hill*
1950 Julius Albert Suttle, Shelby*
1951 Elbert Clifton Daniel, Zebulon*
1952 Charles M. Andrews, Burlington*
1953 John Cogdell Hood, Kinston*
1954 Kelly E. Bennett, Bryson City*
1955 Robert Royal Copeland, Ahoskie*
1956 Wade A. Galliam, Winston-Salem*
1957 Waits Artemus Ward, Swannanoa*
1958 William Burden Gurley, Windsor*
1959 Wilbur Latham West, Roseboro*
1960 Roger A. McDuffie, Greensboro*
1961 Jasper Carlton Jackson, Lumberton
1962 Thomas J. Hamm, Jr., Yanceyville*
1963 William S. Wolfe, Mount Airy*
1964 William Dorsey Welah, Jr., Washington*
1965 Rowe B. Campbell, Taylorsville*
1966 Alfred N. Martin, Roanoke Rapids*
1967 I. Thomas Reamer, Durham*
1968 John T. Stevenson, Elizabeth City*
1969 Hoy A. Moose, Mount Pleasant
1970 Bernard Rudolph Ward, Goldsboro
1971 Robert Buckner Hall, Mocksville
1972 John T. Henley, Hope Mills
1973 June Bush West & Jean Bush Provo Raleigh
1974 Edwin Rudolph Fuller, Salisbury
1975 Jesse M. Pike, Concord
1976 B. Cade Brooks, Fayetteville*
1977 David R. Davis, Williamston*
1978 James Leonard Creech, Smithfield
1979 Gilbert Clyde Hartis, Winston-Salem
1980 Ralph P. Rogers, Jr., Durham
1981 Harold Vann Day, Spruce Pine
1982 W. Thomas Boone, Ahoskie*
1983 Rheta E. & Milton W. Skolaut Chapel Hill
1984 Thomas R. Burgiss, Sparta
1985 William H. Randall, Jr., Lillington
1986 Jack G. Watts, Burlington
1987 John C. Hood, Jr., Kinston

*Deceased

**The Mortar-and-Pestle Award is presented annually by the North Carolina Pharmaceutical Association in recognition of many years of distinguished service to Pharmacy, Public Health and Community Involvement.

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See adjacent page for brief summary of prescribing information

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Summary.
Consult the package literature for prescribing information.
Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci)
Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.
Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
Precautions:
• Discontinue Ceclor in the event of allergic reactions to it.
• Prolonged use may result in overgrowth of nonsusceptible organisms.
• Positive direct Coombs' tests have been reported during treatment with cephalosporins.
• Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.
Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
• Gastrointestinal (mostly diarrhea) 2.5%
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever) 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
• As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
• Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
• Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.
Abnormalities in laboratory results of uncertain etiology:
• Slight elevations in hepatic enzymes.
• Transient fluctuations in leukocyte count (especially in infants and children).
• Abnormal urinalysis; elevations in BUN or serum creatinine.
• Positive direct Coombs' test.
• False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). (042188L)
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CALENDAR OF EVENTS

1988

October 5-6
NCSHP Fall Seminar, Greensboro, NC
October 9-15
North Carolina Pharmacy Week
October 9-13
NARD 90th Annual Convention, Atlanta, GA
October 19
Board of Pharmacy Reciprocity Examination
October 22
UNC School of Pharmacy Alumni Day
October 22-26
NWDA Annual Meeting, Maui, Hawaii
October 23
NCPhA Executive Committee Meeting
October 27
NCPhA Woman's Auxiliary Fall Convocation
November 5
NCPhA Endowment Fund Dinner, Kenan Center
November 9-13
ASCP Annual Meeting, Las Vegas
November 14
Board of Pharmacy Reciprocity Examination
December 4-8
ASHP Midyear Clinical Meeting, Dallas, TX

1989

January 7
Campbell University School of Pharmacy spring classes begin
January 17
UNC-CH School of Pharmacy spring classes begin
January 23-24
Board of Pharmacy Licensure Examination
February 10-12
Pharmacy Leadership Forum, Southern Pines, NC
February 2-3
NCSHP Winter Meeting, High Point, NC
February 23
NCPhA Socioeconomic Seminar, Greensboro, NC
March 19-25
National Poison Prevention Week
April 8-13
APhA Annual Meeting, Anaheim, CA
May 17
NCSHP/NCPhA Management Seminar, North Myrtle Beach, SC
May 17-21
NCPhA Annual Convention, North Myrtle Beach, SC
June 4-8
ASHP Annual Meeting, Nashville, TN

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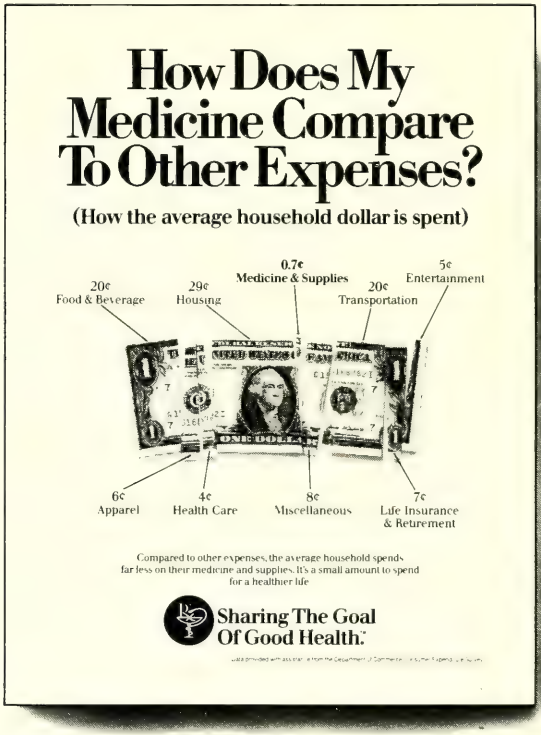
How Does My Medicine Compare To Other Expenses?
(How the average household dollar is spent)
0.7¢ Medicine & Supplies
5¢ Entertainment
20¢ Food & Beverage
29¢ Housing
20¢ Transportation
6¢ Apparel
4¢ Health Care
8¢ Miscellaneous
7¢ Life Insurance & Retirement
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WEDDINGS

MARY ANNE THOMPSON and Rolly Bannister III were married June 4, 1988 in Raleigh, North Carolina at St. Andrews United Methodist Church.

The bride is a 1986 graduate of the University of North Carolina at Chapel Hill School of Pharmacy and is employed by Wake County Medical Center as a staff pharmacist. The bridegroom is President of Regal Homes in Raleigh, N.C. and a 1985 graduate of East Carolina University. The couple will live in Cary.

SONYA LISA RAY of Charlotte and Jay Morgan Norris of Matthews were married June 15, 1988 at Matthews United Methodist Church in Matthews, N.C.

The bride graduated from the University of North Carolina at Chapel Hill School of Pharmacy in 1984. The groom, son of Barbara and Charles Norris both of whom graduated from UNC School of Pharmacy in 1955, received a Masters Degree in Business Administration from Western Carolina University in 1984. The couple will live in Gibsonville, N.C.

HONORABLE MENTIONS

JAMES C. McALLISTER, Director of Pharmacy, Duke Medical Center, was a featured speaker at The Food and Drug Law Institute seminar, *Prescription Drug Benefit of the Medicare Catastrophic Protection Act,* on July 26, 1988, during a forum entitled, *"The Impact of the Legislation on Related Industries",* Representing the American Society of Hospital Pharmacists, McAllister spoke on "The Impact of the New Home I.V. Drug Benefit". McAllister is on the Board of Directors for the American Society of Hospital Pharmacists.

CELESTE LINDLEY, Assistant Professor Pharmacy Practice, UNC-CH School of Pharmacy, recently published an article, "Breast Cancer: Detection, Prevention, and Therapeutics," in the July, 1988 issue of *American Pharmacy.* Lindley summarized basic and currently accepted information regarding the occurrence of the disease, signs and symptoms, staging and prognosis, treatment of early stage and advanced disease, and early detection and screening recommendations.

WELCOME NEW MEMBERS

Marcus F. Cameron, Winston Salem
Roy B. Smith, Jr., Newland
Jennifer Chapin, Raleigh
Paul Hayes, Durham
Judith M. Jones, Charlotte
Robert S. Gustashaw, Charlotte
Whit Haney, Clinton
Roy L. Skinner, Concord
Deneen Alicia Terrell, Raleigh
Catherine McClure, Charlotte
Michele Lyn Arling, Chapel Hill
Judie Rech, Salisbury
John Walter McCall, Durham
Margaret Anita Stover, Greensboro
Denise Gray Barnes, Oxford, OH
Judith M. Jones, Charlotte

Dan Kushner, Editor Emeritus, "American Druggist", Dies at 72

Dan Kushner, 72, editor emeritus of *American Druggist* magazine, died at his home in Cranbury, NJ, on August 8, 1988.

Mr. Kushner had been engaged in pharmaceutical journalism for over 50 years. He joined *Drug Topics* in 1937 as an assistant editor, eventually becoming associate editorial director. He was 14 years with the magazine, except for time out in the Army during World War II.

In 1951 Mr. Kushner joined *American Druggist* as executive editor. In 1968 he was named editor of the magazine, and editor emeritus in 1981. As editor emeritus he continued to write editorials and handle special assignments.

Mr. Kushner is survived by his wife, Anna. Also surviving is their daughter, Judith, a professional translator who works with the United Nations and other clients; Judith's husband, James, and their children Laura and Jonathan, of Seattle, Washington.

The family would appreciate contributions to the American Heart Association or the Raphell Sims Lakowitz Memorial Foundation, 52-36 Douglaston Parkway, Douglaston, NY 11362, in Dan Kushner's memory, in lieu of flowers.

HEALTH NEWS

RETIN-A: AN EXPENSIVE THERAPEUTIC GAMBLE

The Food and Drug Administration is cautioning consumers about the indiscriminate use of the prescription acne drug Retin-A (tretinoin) for wrinkles, as well as about purchasing watered-down, illegal versions and imitations.

FDA Commissioner Frank E. Young, M.D., Ph.D., has also announced a nationwide crackdown on unlicensed manufacturers who have begun to advertise and distribute bogus Retin-A drugs.

Young said, "Use of all of these products amounts to an expensive therapeutic gamble. The problem is three-fold," he explained.

"First, Retin-A itself has not undergone proper long-term testing for use as a wrinkle cream, and the present formulation is known to cause some adverse local effects such as severe swelling and peeling.

"Second, a few dermatologists, pharmacists and unlicensed manufacturers are compounding, promoting and selling products represented to be Retin-A, but which may contain different amounts of the active ingredient than what has been approved for Retin-A.

"Third, some products are clearly put out to simply look like or have names similar to Retin-A or retinoic acid, but contain none of the active ingredient. These are generally sold as cosmetics and, like the other products, can be very expensive," he said.

Retin-A is manufactured by Ortho Pharmaceutical Corp. of Raritan, N.J., and is approved for use in treating acne. For this use, it is generally applied to small areas of the skin for limited periods of time.

Recently, however, the drug received nationwide attention because of a research article suggesting that it may reduce or reverse wrinkling due to aging and sun damage. FDA does not endorse these study conclusions because of the small number of patients studied and the subjectivity of the observations.

"Unfortunately," Dr. Young continued, "consumers have apparently accepted the reports of this one small study as gospel and are willing to gamble with Retin-A and imitation products sold through the mail or in clinics. Even some dermatologists are jumping on the bandwagon by offering 'own label' products to their patients at exhorbitant prices."

FDA is actively investigating a number of firms promoting and selling anti-wrinkle formulas and is initiating regulatory action when warranted. The agency is working with state authorities and the U.S. Customs Service, Postal Service and the Federal Trade Commission to curb the proliferation of illegal versions of Retin-A.

Dr. Young emphasized that Retin-A has been approved only for treating acne, and that there is no conclusive evidence that it reduces wrinkles. "Long-term animal studies and well controlled clinical trials involving larger numbers of patients in various age groups are needed to assess the risks and benefits of Retin-A as a wrinkle reducer," he said.

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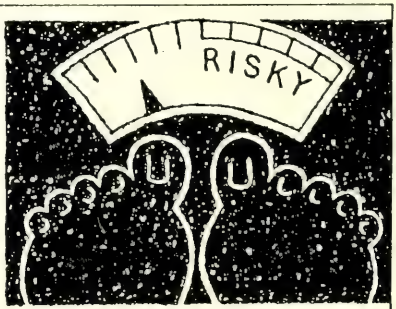

DICKINSON'S PHARMACY

The homeopathy rage. Like many thousands of independent pharmacists around the country, Gary Fragale has been selling small amounts of over-the-counter homeopathic medicines as a sideline for several years. He doesn't promote them in his Farmington, West Virginia pharmacy, because they sell — with increasing vigor — all by themselves.

The one he especially likes is Oscillococcinum, or "anas Barbariae hepatis et cordis extractum hpus 200c," imported from France by John A. Borneman & Co., 1208 Amosland Road, Norwood, PA, and labeled "for relief of flu-like symptoms."

The performance standard that Gary applies is the one many pharmacists apply — his patients say it works, and they come back for more.

Gary also likes the basic idea of homeopathic medicine — natural therapy, stimulating the body's own defenses to cure ailments, rather than drowning the ailment in massive quantities of alien substances.

Does homeopathy work? I have looked for years for an answer that I could accept, and I will continue to look. Gary's zeal aside, I can only say that faith on the part of the patient (you would call it the "placebo effect" if we were talking about analgesics) seems to play a big role — which may be why homeopathy has been around so long without many people being aware of it.

The Food and Drug Administration, however, has quite another view of homeopathy: unbridled and barely contained skepticism.

In June, it announced a major crackdown on health fraud and quackery that it says have become epidemic, thanks to a statutory loophole that Congress provided for homeopathic medicines back in 1938.

From the viewpoint of many FDA enforcement officials, there's a special delight in the new campaign; the celebrated 1938 Food, Drug and Cosmetic Act's special exemption for homeopathic medicine from most of their agency's regulations is a wrong that might now be righted.

While it remained relatively unnoticed and useful only to the tiny handful of practicing homeopathic physicians, the exemption was simply there to be tolerated. In the last several years, however, things have changed greatly in FDA's view.

A brand-new FDA internal compliance policy guide, the first ever issued for homeopathic products, reports that this market "has grown to become a multimilion dollar industry" in the U.S., plus booming imports (like Gary Fragale's popular Oscillococcinum remedy from France).

Some of the new "homeopathic" products go way beyond the normal, invisible practice of homeopathic medicine, FDA complains. Just one example is the low-dose phenylpropanolamine skin patches being advertised in the mass media to aid dieting.

Citing homeopathic drug claims for uses against serious diseases as well as self-limiting conditions, FDA's new compliance policy guide tells the agency's officers that the Act-sanctioned *Homeopathic Pharmacopeia,* which has been greatly expanded in parallel with the recent marketing boom, is not an arbiter of product safety and effectiveness. Some segments of the new market appear to have been using it for that.

The guide instructs officers to also use other texts to assess what a given product's labeling might have to contain to be regarded as bearing "adequate" directions for use under the law.

All this is a can of worms that senior FDA staff have been dreading for years. To them, it has the aroma of a lengthy court challenge, and there are some influential Washington lawyers now already involved in significant efforts to preserve the 1938 statutory exemption form FDA's encroachemnts.

Part of the FDA dread comes from the idea that new-style homeopathy might indeed win through, and that FDA might be ordered to set "effectiveness" standards for these products — a notion that boggles FDA minds, considering the minutely subtherapeutic amounts of active ingredient in most homeopathic drugs.

And who can argue what the "Congressional intent" was in granting this exemption back in 1938?

Some FDA scholars who have looked it up say there is no mention of intent in any of the Congressional committee reports from that time, and they speculate that the exemption came in one of those mad midnight horse-trading frenzies for which Congress is famous (one of the pivotal votes apparently belonged to a congressman who was also a homeopathic physician).

The compliance policy guide's preamble has an instructive description of homeopathy:

"The term 'homeopathy' is derived from the Greek words *homeo* (similar) and *pathos* (suffering or disease). The first basic principles of homeopathy were formulated by Samuel

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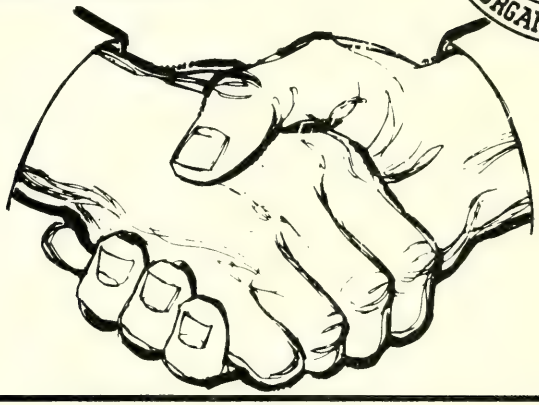

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DICKINSON'S PHARMACY

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Hahnemann* in the late 1700's. The practice of homeopathy is based on the belief that disease symptoms can be cured by small doses of substances which produce similar symptoms on healthy people.

"The Federal Food, Drug, and Cosmetic Act (the Act) recognizes as official the drugs and standards in the Homeopathic Pharmacopeia of the United States and its supplements (Sections 201 (g) (1) and 501 (b), respectively). Until recently, homeopathic drugs have been marketed on a limited scale by a few manufacturers who have been in business for many years and have predominantly served the needs of a limited number of licensed practitioners. In conjuction with this, homeopathic drug products historically have borne little or no labeling for the comsumer.

"Today the homeopathic drug market has grown to become a multi-million dollar industry in the United States, with a significant increase shown in the importation and domestic marketing of homeopathic drug products. Those products that are offered for treatment of serious disease conditions must be dispensed under the care of a licensed practitioner. Other products, offered for use in self-limiting conditions recognizable by consumers, may be marked OTC."

FOOTNOTE: When I tried to talk to Oscillococcinum's distributor at the address given on one of Gary Fragale's labels, the operator could find no such company. Gary's last contact with them was two winters ago, so he had no idea where they are now. Perhaps that's another reason why FDA is so concerned.

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*Of the family that founded Philadelphia's Hahnemann University.

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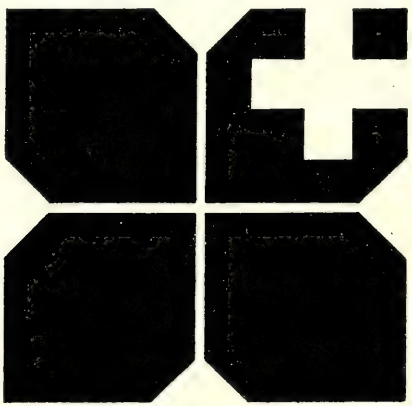

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CORRESPONDENCE COURSE
ADVISING CONSUMERS ON OTC ANTITUSSIVES AND EXPECTORANTS

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Goals

The goals of this lesson are to:

1. review basic information about coughs and the role of cough suppressants and expectorants;
2. discuss important information about the pharmacology and therapeutics of antitussive and expectorant medications, and suggest consumer advice;
3. present the findings of an FDA/OTC advisory panel that reviewed antitussive and expectorant drugs.

Objectives

At the conclusion of this lesson, the participant will be able to:

1. list the Category I antitussives and expectorants;
2. state important pharmacologic and therapeutic information about cough suppressants;
3. discuss relevant patient information for correctly using these drugs; and
4. discuss the findings of the FDA/OTC advisory panel that reviewed antitussives and expectorants.

Introduction

Coughing is a symptom associated with a wide variety of respiratory disorders. It also occurs when irritants are inhaled. Coughing is a normal physiological event in that the body attempts to clear the respiratory passages of these irritants or other debris. Coughing frequently accompanies the common cold due to mucus that has accumulated within the respiratory passages as a result of viral or bacterial invasion.

Non-productive coughing may be bothersome and annoying when it interferes with an individual's comfort, rest, work or recreation. It may be severe enough to induce vomiting or exhaustion. The act of coughing sprays aerosolized mucus particles that may contain virus from the respiratory tract into the air. Thus it is also annoying to persons around them, and gives individuals the desire to control it.

This lesson examines OTC antitussives and expectorant drug products. It distinguishes between the pharmacologic actions of the two, and discusses major warnings, precautions and drug interactions that consumers should be made aware of. It also provides general patient information for correct use of these products.

Coughing

The impulse to cough may originate from within the respiratory system or from external forces. When the sensory nerve endings within the mucous membranes of the respiratory passages are stimulated, coughing ensues.

Such stimulation can result from foreign substances blocking the breathing passages, bronchoconstriction, chemical irritation, presence of retained mucus or fluids, or infection. Tickling the external ear canal is an example of an external stimulation that may induce coughing.

Productive vs. Non-Productive Coughs. A *productive* cough is a natural physiological

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in the service of pharmacy

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CORRESPONDENCE COURSE

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response to remove accumulated material from the lower respiratory tract. Productive cough generally responds to increased fluid intake or to an OTC expectorant.

A *non-productive* (nuisance) cough serves no physiological function. Non-productive coughs normally require a cough suppressant product such as codeine, dextromethorphan or diphenhydramine for relief.

Antitussives

An antitussive, which is usually considered synonymous with a cough suppressant, can be either cough suppressant or expectorant. Antitussives act peripherally (e.g., local anesthetics) on sensory nerve receptors within the respiratory tract, or centrally (e.g., codeine and dextromethorphan) to suppress the medullary cough center and, consequently, raise the threshold for incoming cough impulses. This inhibits or suppresses the act of coughing.

Other antitussives may enhance removal of bronchial fluids by decreasing the viscosity of retained respiratory secretions. Humidification of inspired air and/or expectorants provide such activity. Additionally, demulcents that soothe irritated throat mucosa and bronchial airway walls, and other substances that relax smooth muscle within the bronchial airway in the presence of spasm may also produce an antitussive action.

Table 1 lists cough suppressants and expectorants that have been reviewed for safety and effectiveness by an FDA/OTC advisory panel. At the time of original publication of this lesson, this listing of ingredients was at the "tentative final" stage. This means that FDA's "final" action had not been taken.

Cough Suppressants

Codeine. The narcotic codeine and its salts are effective antitussives. Codeine has remained the standard antitussive to which all others are compared.

Used as directed, codeine is not only effective, but also safe for self-administration. Oral doses rarely cause physical dependence. The potential for abuse is low. The quantity of codeine allowable in OTC cough preparations is considered C-V under the Federal Controlled Substance Act. However, its sale is currently restricted to prescription-only status in some states.

Single adult oral doses of codeine up to 20 mg are not associated with significant adverse effects. Larger doses may cause drowsiness, lightheadedness, loss of appetite, nausea, vomiting, and headache. Some people also experience abdominal discomfort and constipation when taking codeine-containing products. In fact, FDA requires a warning on the label of OTC's containing codeine that constipation may occur.

Most literature citations of codeine toxicity refer to its use as a prescription analgesic which is normally in the range of 60 to 120 mg or more every four hours. Central sedation including respiratory arrest, coma, and death have been reported in children under six years of age following single doses of 5 to 12 mg/kg.

There are no well controlled studies that have investigated the antitussive effect of codeine in children in this age group. Therefore, FDA has stated that, in its opinion, codeine should not be given to children under age six unless under the direct supervision of a physician.

Dextromethorphan. Dextromethorphan, the dextrorotatory isomer of the morphinan molecule, is neither analgesic nor addictive. This cough suppressant has been shown in clinical trials to be just as efficacious on a mg-to-mg basis as codeine. While a few medical experts question the efficacy of dextromethorphan, most agree that it is a very effective antitussive compound. Many believe it to be the ideal cough suppressant.

Adverse effects reported for dextromethorphan are rare. There is neither respiratory nor cardiovascular depression from therapeutic doses. Doses exceeding 300 mg (15 times the recommended dose) taken several times daily have, on occasion, caused bizarre behavior.

Reactions reported in children include nausea, insomnia, urticaria, and hallucinations. A review of the recent literature concerning adverse effects to dextromethorphan in children aged one to ten years indicate that the drug is safe.

Diphenhydramine Hydrochloride. The antihistamine diphenhydramine (e.g., Benadryl®, Benylin®) was initially used in the mid 1940's to relieve a wide variety of allergic symptoms. Over the years, the drug has been repeatedly shown to possess cough suppressant activity ranging from 25 to 120 percent of that of codeine. Most clinical studies reveal that a 25 to 50 mg antitussive dose of diphenhydramine is equivalent to 15 mg of codeine.

Diphenhydramine acts to depress the central cough center by mechanisms similar to codeine. It also possesses anticholinergic activity which blocks efferent (outgoing) impulses from the

cough center. These nerve fibers are transmitted through cholinergic pathways to the diaphragm, and to intercostal and abdominal muscles. All are involved in the coughing reflex.

Side effects from diphenhydramine are rare. The most common one is CNS sedation, with nearly 50 percent of persons taking 50 mg doses experiencing some degree of drowsiness. Lower doses, common with cough preparations, are

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TABLE 1
Antitussive and Expectorant Ingredients Classified as to Safety and Effectiveness by the FDA

Category*	Ingredient	Antitussive	Expectorant
I	Benzonatate**	X	
	Camphor ointment	X	
	Chlophedianol HCl**	X	
	Codeine; C. sulfate, C. phosphate	X	
	Dextromethorphan; D. HBr	X	
	Diphenhydramine HCl	X	
	Guaifenesin		X
	Menthol/peppermint oil (ointment, lozenge or compressed tablet)	X	
II	Antimony potassium tartrate		X
	Chloroform		X
	Hydrocodone bitartrate	X	
	Iodides		X
	Ipecac syrup and fluid extract		X
	Squill preparations		X
	Turpentine oil (spirits, oral)	X	X
III	Ammonium chloride		X
	Beechwood creosote	X	X
	Benzoin preparations (inhalant)		X
	Camphor (lozenge, topical/inhalant)	X	X
	Caramiphen edisylate	X	
	Carbetapentane citrate	X	
	Cod liver oil	X	
	Elm bark	X	X
	Ethylmorphine HCl	X	
	Eucalyptol/eucalyptus oil (ointment, lozenge, mouthwash, topical/inhalant	X	X
	Horehound	X	
	Menthol/peppermint oil (mouthwash, topical/inhalant)	X	X
	Noscapine; N. HCl	X	
	Pine tar preparations		X
	Potassium quaiacolsulfonate		X
	Sodium citrate		X
	Terpin hydrate preparations		X
	Thymol (ointment, lozenge, room spray, mouthwash, steam inhalant)	X	
	Turpentine oil (ointment, topical/inhalant)	X	X

*Categories: I = Safe and effective; II = Unsafe and/or ineffective; III = Safe, but not yet proven effective.

**Suggested by FDA to be suitable for OTC marketing. No final decision made as of the date of publication of this article.

CORRESPONDENCE COURSE

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much less likely to produce this effect.

The recommended OTC dose is 12.5 to 25 mg. Manufacturers are not permitted to market higher strengths over-the-counter at this time.

Diphenhydramine has a low potential for abuse. Because of its anticholinergic activity, dry mouth and respiratory passages that would result from frequent or large doses limit its abuse.

Camphor, Menthol, Eucalyptus. Incorporated into a petrolatum base (i.e., Vicks VapoRub®) and applied onto the chest, camphor, eucalyptus, and menthol have long been used for their cough suppressant activity. The FDA/OTC advisory panel which studied these ingredients found insufficient evidence to suggest that they possess effective action. Since that time, however, additional clinical trials have been completed. The results indicate that camphor and menthol do indeed demonstrate cough suppressant action. They have, therefore, been classified as Category I.

Eucalyptus remains in the "needs more study" category (Category III). It appears that, if it continues to be included in cough remedies, it will probably be as a flavoring/aromatic agent.

Camphor and menthol stimulate the cold sensory receptors and produce a feeling of coolness on the respiratory tract. This causes a local anesthetic action on respiratory mucous membranes, and is probably responsible for their cough suppressant effectiveness.

The ointment product should be applied in a thin layer to the throat and chest area three times a day or as directed by a physician. The area of application can be covered with a warm, dry cloth if desired (just like grandma used to do!). This cloth, or clothing, should be left loose about the throat to enable vapors to reach the nose and mouth. The product has not yet been specifically tested for children under the age of two.

Menthol alone, in doses of 5 to 10 mg, is also used in throat lozenges and is classed as Category I for this purpose. Consumers should allow the medication to slowly dissolve in the mouth, repeating administration every hour or more as needed. Again, eucalyptus is present as an aromatic.

Expectorants

Expectorants dilute thick, tenacious secretions within the respiratory system. This facilitates their removal. OTC products containing expectorants are often used for both acute (e.g., common cold, acute bronchitis) and chronic (e.g., asthma, emphysema) conditions.

The lumen diameter of bronchioles is less than one millimeter. The mucus layer that lines these tubules is about five micrometers. During periods of chronically inflammed bronchioles, this mucus layer may increase in thickness twenty-fold to 100 micrometers or more. Therefore, a very slight spasm may cause bronchial lumen occlusion. For this reason, it is important for pharmacists to recommend that patients with chronic, recurring cough seek medical attention rather than OTC cough suppressants.

The pharmacological action for expectorants is thought to be stimulation of receptors in the gastric mucosa which enhance fluid output from secretory glands of the gastrointestinal system. This increases fluid flow from glands that line the respiratory tract.

Expectorants may also stimulate vagal nerve endings in bronchial secretory glands. Some data show that they stimulate centers within the brain which promote enhanced respiratory fluid flow.

Regardless of action, there is an increase in volume along with a decreased viscosity of bronchial secretions. This facilitates mucus removal and reduces irritation to the bronchial tissue, therefore suppressing coughing. Increased hydration and environmental relative humidity enhance their activity.

TABLE 2
Representative OTC Single Ingredient Antitussive Products

Containing Dextromethorphan	
Benylin DM	10 mg/5 ml
Chloraseptic Cough	10 mg/lozenge
Congesprin	5 mg/5 ml
Creamacoat 1	10 mg/5 ml
Delsym	30 mg/5 ml
Hold	7.5 mg/lozenge
Mediquell	15 mg/lozenge
Pediacare 1	5 mg/5 ml
Pertussin 8 hour	15 mg/5 ml
Romilar CF	15 mg/5 ml
Romilar Childrens	2.5 mg/5 ml
St. Joseph Cough	7.5 mg/5 ml
Sucrets Cough	7.5 mg/lozenge
Containing Guaifensin	
Breonesin	200 mg/capsule
Colrex	100 mg/5 ml
Creamacoat 2	100 mg/5 ml
Robitussin	100 mg/5 ml
2/G	100 mg/5 ml

TABLE 3
Representative OTC Combination Cough Preparations Containing Dextromethorphan and Guaifenesin

Product	Dextromethorphan* (mg)	Guaifenesin* (mg)
Cheracol DM Liquid	10 mg	100 mg
Efficol Expectorant Liquid	2.5 mg	50 mg
Kolephrin GG/DM Liquid	15 mg	150 mg
Novahistine Cough Liquid	10 mg	100 mg
Pertussin Original Liquid	3.5 mg	25 mg
Queltuss Tablets	15 mg	100 mg
Robitussin DM Liquid	15 mg	100 mg
Robitussin Cough Calmers Lozenges	7.5 mg	50 mg
Silexin Cough Liquid	5 mg	50 mg
2/G DM Liquid	15 mg	100 mg
Vick Cough Liquid	3.5 mg	25 mg

*Per 5 ml, tablet or lozenge

The FDA/OTC advisory panel's original report on expectorants did not include any Category I ingredients when it was published. Of the twenty ingredients evaluated as potential expectorant drugs, six were placed into Category II (banned) and the other fourteen were classified as Category III (needs more study).

Since that time, however, clinical trials on guaifenesin have been conducted and preliminary reports from FDA indicate that the drug will receive official Category I rating soon. Guaifenesin has been demonstrated by double-blind, crossover studies to be an effective expectorant.

Guaifenesin. Guaifenesin (previously called glyceryl guaiacolate) decreases sputum adhesiveness and enhances its removal in doses of 2400 mg per day. Although effectiveness is not prominent following five to seven days of therapy, some expectorant action can be anticipated following administration oif several doses.

Guaifenesin is safe when taken over a wide range of doses, and adverse effects are rare. The most commonly reported ones include vomiting, nausea and gastric disturbance, and, rarely, drowsiness. Taking guaifenesin with water often reduces GI effects.

Tables 2 and 3 contain representative products that contain Category I antitussive and/or expectorant ingredients.

Combination Products

Formerly, OTC cough control products frequently contained several ingredients. Some combinations made clinical sense, and others had little therapeutic value. The FDA/OTC advisory panel addressed the issue of combining antitussive and expectorant ingredients. The results of its report are listed in Table 4.

"Old Standards"

Several of the "old standard" ingredients that were once purported to exert expectorant activity such as ammonium chloride, citric acid/sodium citrate and terpin hydrate have not yet made the grade of proven effectiveness. While they are undoubtedly safe in the doses previously used, the total dose needed to exert better expectorant

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TABLE 4
Combinations Permitted for OTC Antitussive and Expectorant Drug Products

Antitussive + Antihistamine*
Antitussive + Antihistamine + Decongestant
Antitussive + Expectorant**
Antitussive + Decongestant
Antitussive + Local Anesthetic***
Antitussive + Expectorant + Decongestant**
Expectorant + Oral bronchodilator****
Expectorant + Decongestant

*Must be labeled, "Caution May cause marked drowsiness"
**For treatment of non-productive cough
***Can only be formulated as a lozenge or compressed tablet for dissolution in the mouth
****Must be labeled only for cough associated with asthma

CORRESPONDENCE COURSE

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activity than water appears to be too great to be palatable or reasonable for pharmaceutical incorporation into cough syrups.

What's Ahead?

Chlophedianol hydrochloride (formerly available as Ulo Syrup) and **benzonatate** (available as Tessalon Perles) have both been suggested by FDA to be suitable for switching from their current prescription-only status classification to OTC status. Both substances have been available on prescription for nearly two decades, and both have been shown to be safe when used as directed. No final decision on either drug has been made, and OTC marketing will not be permitted until FDA publishes its Final Rule on OTC antitussives/expectorants.

Consumer Advice

Consumers should be reminded that coughing is a normal physiological reflex that is not intended to be totally suppressed. Whenever coughing interferes with sleep or other activities, it can be subdued when there are no contraindicating factors such as asthma.

A variety of disorders may cause coughing as a symptom. Whether a cough suppressant or expectorant should even be used depends upon the particular medical condition. Asthma and emphysema, require the cough reflex to keep the respiratory passages cleared of excessive secretions. Suppressants should not be used in these cases. For self-limiting conditions such as the common cold, cough suppressant use is appropriate.

When additional symptoms (e.g., post-nasal drip) are present, appropriate products containing a combination of ingredients may be selected and recommended. In the absence of other symptoms, products containing only a cough suppressant and/or expectorant should be recommended.

Individuals taking them should be advised to drink at least eight to ten glassfuls of water daily while the cough is productive. A salt water gargle may help relieve minor throat irritation and alleviate coughing. A room or whole house humidifier may be beneficial during the winter months.

Some people feel that taking cough medicine with water reduces its effectiveness. This may be true for older products that depended on demulcent activity to soothe irritated tissues. For truly effective products, water can be taken if the medication tastes badly, or if it irritates the stomach. A lot of water should definitely be taken to assist expectoration when the cough is productive.

Coughing frequently persists for several days beyond the disappearance of other common cold symptoms. Whenever a cough continues or worsens, or is still present beyond ten to fourteen days of onset of a cold, medical assistance should be sought. These may represent a more serious medical condition.

Table 5 lists important points of information for consumers requesting a cough suppressant.

TABLE 5
Advice for Consumers Requesting a Cough Preparation

- Take only as directed on label.
- Drink at least 8 to 10 glassfuls of water (or other fluids) each day while taking this product.
- Increase the relative humidity in the home.
- Ask your pharmacist for a calibrated measuring device to administer doses to children. Household spoons may differ in size.
- Consult a doctor if cough persists for more than one week, tends to recur, or is accompanied by high fever, rash or persistent headache. These may be signs of a serious condition.

CORRESPONDENCE COURSE QUIZ

ANTITUSSIVES/EXPECTORANTS

1. Antitussives that act centrally do so by suppressing the cough center which is located in the:
   a. hypothalamus.
   b. lungs.
   c. medulla.
   d. throat.
2. Which of the following most closely approximates the antitussive action of codeine on a milligram-to-milligram basis?
   a. Dextromethorphan
   b. Diphenhydramine
   c. Guaifenesin
   d. Terpin hydrate
3. The drug that has exhibited the greatest evidence of decreasing sputum adhesiveness and enhancing its removal is:
   a. codeine.
   b. dextromethorphan.

c. diphenhydramine.
d. guaifenesin.

4. Which of the following is most appropriate to recommend to a consumer who requests an expectorant product containing guaifenesin for a child?
   a. Creamacoat 1
   b. Creamacoat 2
   c. Creamacoat 3
   d. Creamacoat 4
5. Diphenhydramine reportedly has a low potential for abuse because of which of its following actions?
   a. Antiadrenergic
   b. Anticholinergic
   c. Antiemetic
   d. Antiserotonergic
6. The warning that must appear on codeine-containing OTC cough syrups advises consumers that the products may cause:
   a. aggravation of diabetes.
   b. bone marrow depression.
   c. constipation.
   d. kidney disease.
7. Which of the following has shown the greatest evidence of effectiveness in both ointment and lozenge dosage form?
   a. Benzonatate
   b. Camphor
   c. Eucalyptus
   d. Menthol
8. The most appropriate cough remedy to suggest to a consumer requesting "something" for a productive cough is a/an:
   a. cough suppressant.
   b. expectorant.
9. Three of the following drugs were once prescription-only and have either been switched or have been recommended for switch to OTC status. The agent that has been OTC longest is:
   a. benzonatate.
   b. chlophedianol.
   c. codeine.
   d. diphenhydramine.
10. Which of the following is the best agent to recommend to a consumer who requests a preparation for a productive cough?
    a. Codeine
    b. Dextromethorphan
    c. Diphenhydramine
    d. Guaifenesin

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PHARMACIST WANTED: Iredell Memorial Hospital is a modern, community, acute-care hospital with a reputation for excellence. We are adding new pharmacist positions. New salary scale. Computerized unit dose, IV Admixture services, and therapeutic drug monitoring programs. New graduates are encouraged to apply. Contact Beverly Wilkerson, Director of Personnel or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

PHARMACIST WANTED: To fill recent vacancy on staff of a 333 bed community hospital in Goldsboro, North Carolina and join an eight pharmacist staff in a progressive environment in Eastern NC. Salary offered ranges from $34,382 (new graduate) to $37,918 (with 5 years or more applicable experience) for a forty hour week with every other weekend off. Seriously interested pharmacists should send a resume to: Director of Human Resources, Wayne Memorial Hospital, 2700 Wayne Memorial Drive, Goldsboro, NC 27530.

STAFF PHARMACIST NEEDED: Staff pharmacist needed for 142-bed acute care hospital located in Sanford, NC, with computerized mobile pharmacy services, IV Admixture, oncology clinic. Responsibilities include membership on hospital committees and participation in the department's quality assurance and drug utilization reviews, drug therapy monitoring, patient and nursing education. Competitive salary and benefits package, educational allowance. Contact Edna Perkinson, Director of Pharmacy, or the Human Resources Department, Central Carolina Hospital, 1135 Carthage Street, Sanford, NC 27330.

STAFF PHARMACIST NEEDED: Cape Fear Valley Medical Center is currently seeking a Staff Pharmacist. We offer a challenging career in Hospital Pharmacy for a pharmacist seeking to broaden their professional horizons and use their clinical skills. Qualifications include: North Carolina license. Previous hospital experience preferred, but not required. Cape

Fear Valley Medical Center is a progressive, comprehensive 506 bed Medical Center which is dedicated to quality, excellence and compassion. We offer competitive salary and benefits. Send resume to: Cape Fear Valley Medical Center, P.O. Box 2000, Fayetteville, NC 28302, Attn: Personnel.

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CLINICAL COORDINATOR: Challenging position in a progressive patient-oriented 600 bed hospital for initiation of clinical services. Responsibilities will include developing a formulary, initiating clinical services, etc. Clinical degree required (Pharm.D. or M.S.) with previous experience in a similar position. We are a growth company (HPI) offering top salary, fringe benefit package, and career advancement. For confidential consideration, please send resume to Mr. Lou Weaks, Presyterian Hospital Pharmacy, P.O. Box 33549, Charlotte, NC 28233.

STAFF PHARMACIST: Progressive Community Hospital (50 beds with 120 bed nursing home) located in scenic mountains of Western North Carolina. Immediate opening for full time Staff Pharmacist clinical experience and NC license required. Excellent benefit package and competitive wages. EOE. Mail inquiries to: Murphy Medical Center, 2002 U.S. Highway 64 East, Murphy, NC 28906, or call (704) 837-8161

RETAIL POSITIONS OPEN

PHARMACIST WANTED: Pharmacist interested in managing independent store 30 miles north of Charlotte. Closed nights, weekends and holidays. Excellent salary, good benefits and possibility of ownership. Reply to box TBX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

PHARMACIST WANTED: We are seeking an ambitious, and professional career-minded individual for a pharmacist position in Greensboro, High Point and Winston-Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure pharmacy setting". If interested call Lew Thompson at 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke, VA 24038. EOE.

PHARMACISTS WANTED: Drug Emporium, Greensboro, NC now hiring pharmacists. Excellent starting salary. Complete benefit package, plus bonuses included. Call Kent Huffman for details at (919) 282-3993.

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PHARMACISTS WANTED: Due to rapid growth Kerr Drug Stores now have positions available for pharmacists in Rocky Mount, Tarboro, Raleigh, Fayetteville, Wilson and Aberdeen. Kerr Drug offers opportunity for growth and in store management. Excellent benefits. Send resume to Jackie Gupton, P.O. Box 61000, Raleigh, NC 27661, or call (919) 872-5710.

PHARMACISTS WANTED: Pharmacist positions available with ownership privileges. Excellent salary and benefits. Contact Tim Walker at Walker's Pharmacy at (919) 635-9741.

PHARMACIST WANTED: Greensboro Area. Ambitious pharmacist-manager for high-volume multi-service Clinic Pharmacy. GOOD HOURS, GOOD BASE SALARY, GOOD BONUS. Call and/or

continued on page 38

CLASSIFIED ADS

Continued from page 37

send resume to: Lewis Reiger, ENCORE PHARMACY, INC., P.O. Box 23791, Harahan, Louisiana 70183. (504) 733-6031.

PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACISTS WANTED: Full-time pharmacists needed for Eckerd stores in Albemarle, High Point, Salisbury, and Spencer, North Carolina. Interested parties may call (919) 882-8412 or (919) 841-7308 to set up interview date and time.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

PHARMACIST NEEDED: Professional pharmacist needed for Southeastern NC store. Excellent salary and benefits. Outstanding working conditions. Contact Lazelle Marks in Rockingham at (919) 997-4471.

PHARMACIST WANTED: Pharmacist wanted for aggressive pharmacy in Haw River. Would like potential candidate to be interested in buy-in opportunity. Competitive salary and benefit package. Please contact David Smith at (919) 578-0202.

PHARMACIST NEEDED: Pharmacist needed in the Raleigh area for 32 hours a week. Consulting experience helpful. Contact Wayne Creech, Medi-Save Pharmacy at (919) 968-8478.

PHARMACISTS NEEDED: For Rite-Aid stores in Hickory area, Asheboro and Wadesboro. For more information contact Jan Musten at (919) 789-4003.

PHARMACISTS NEEDED: Independent pharmacy need pharmacists for 1 or 2 days per week, 9-6 pm. Pleasant and flexible working conditions. Call 575-6571. Butner.

COUNTY PHARMACIST: Winston-Salem, NC 8:00-5:00 Monday-Friday in outpatient clinic. Paid health, dental and life insurance. Retirement plan and numerous other fringe benefits. Salary negotiable, $30,202 - 45,677. License required, 1 year experience preferred. Call 919-727-2851.

RELIEF WORK

RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call (919) 481-1272 evenings.

NEED A PHARMACIST?: Pharmacist is looking for full-time or relief work in Charlotte area. Call after 7:30 p.m. (704) 553-1924.

RELIEF PHARMACIST AVAILABLE: Live in Chapel Hill. Will travel to any part of state. Retail and clinic experience. Please leave message. 383-1421.

FIXTURES FOR SALE

ANTIQUE STORE FIXTURES FOR SALE: Includes display cases, soda fountain, wall fixtures. Contact Charles Chapman at (704) 933-7775.

START YOUR OWN PHARMACY: Complete store fixtures & computer for sale. Building for rent. Location: Best in town. Call Kelly Terceira at (704) 894-8212 or write P.O. Box 368, Columbus, NC 28722.

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FIXTURES FOR SALE: Used drug store fixtures for sale. Call Dale Knight at (919) 494-2287.

FOR SALE: Fixtures, equipment and inventory. All for one price. Make an offer. Reply to Box NRZ, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

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FOR SALE: Fixtures, equipment, and inventory. All for one price. Make an offer. Reply to Ad No. JTM, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIES FOR SALE

WANT TO BUY: This Iowa pharmacist licensed in NC would like to purchase a pharmacy in Eastern NC. Strictly confidential. If you are interested in selling your pharmacy, please contact Box RTU, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Owners want to retire. Store 12 miles from Charlotte. Sales $225,000 annually. Inventory $45,000. Reply to Box ZYX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

DRUG STORE FOR SALE: Established drug store for young pharmacist. Easy operating as one man store. Very reasonably priced. Write Box No. TTT., c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Store location approximately 25 miles from Charlotte. Sales over $1,000,000 annually. Reply to Box VTC, c/o NCPhA, P.O. box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Pharmacy in small Western North Carolina town. Gross sales in 1987 — $290,000.00. For more information call Steve at (704) 628-3469.

PHARMACY FOR SALE: Pharmacy for sale in Piedmont. Gross sales over $300,000 a year. Contact Box TVD, c/o NCPhA, P.O. box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: North Carolina or NC triad area. 1½ miles from hospital and MD's. 5 ½days, no holidays. Sales — $200,000+. Growth potential. Square footage — 1,800 square feet. Call (919) 869-5851 after 7 p.m.

PHARMACY FOR SALE: Medical Clinic Pharmacy located in suburban Winston-Salem area. Tremendous growth potential around six (6) doctors. Gross sales in 1987 were $177,000. Only 1½ years old. Good hours, 9-6 Monday-Friday. Will sell for a reasonable offer. Reply to Box PZZ, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Pharmacy for sale 25 miles from Charlotte located in ½ mile radius of hospital and 15 doctor groups. Inventory in good shape. Accounts Receivable consistant. Equipment very serviceable. Drive-in window. Annual sales in the $280,000's. Call (704) 283-6574 after 7 p.m.

DRUG STORE FOR SALE: Profitable drug store and fountain located in Western North Carolina. Send inquiries to P.O. Box 10, Hendersonville, North Carolina 28793.

ASHEVILLE PHARMACY FOR SALE: In attractive high traffic area. Profitable with Monday through Friday hours. Inquiries: PHARMACY, P.O. Box 5010, UNIT 101, ASHEVILLE, NC 28813.

PHARMACY FOR SALE — SOUTHERN PIEDMONT — Wish to retire. Gross over $300M year, 40-50% RX. Terms available to qualified person. Call (919) 582-0622.

ASHEVILLE PHARMACY FOR SALE: In attractive high traffic area. Profitable with Monday through Friday hours. Inquiries: PHARMACY, P.O. Box 5010, UNIT 101, ASHEVILLE, NC 28813.

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continued on page 40

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Continued from page 39

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PHARMACIST: Professional Services/ Consultation — Temporary and/or Continual. Contact: L.W. Matthews at (919) 967-0333 or 929-1783. 1608 Smith Level Road, Chapel Hill, NC 27514.

NEED A PHARMACIST?: Pharmacist Store Manager licensed in North Carolina wishes to relocate in Eastern NC. Has 10 years experience as a Pharmacist Manager and Pharmacist in a high volume or front end prescription store in NC. If interested please reply to Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

PHARMACIST OPPORTUNITY: Do you want to stand still as a chain pharmacist. Do you yearn to own your own drug store? Here is an opportunity for you! Coastal NC location, professional practice environment, nursing home provider, computerized pharmacies, option for part ownership. Call Don Heaton at (919) 453-8500 for an appointment to look.

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DOCTOR OF PHARMACY (PHARM.D): Would you like to obtain a Pharm.D. degree? If you are a recent B.S. Pharmacy graduate, contact the Director of Admissions, Campbell University School of Pharmacy, Buies Creek, North Carolina 27506 or Call (919) 893-4111, Ext. 2262.

MOVING? Help us keep your *Carolina Journal of Pharmacy* and other NCPhA mailings coming to your correct address. Please complete the address change form and send to the NCPhA, P.O. Box 151, Chapel Hill 27514, as soon as you know your new address.

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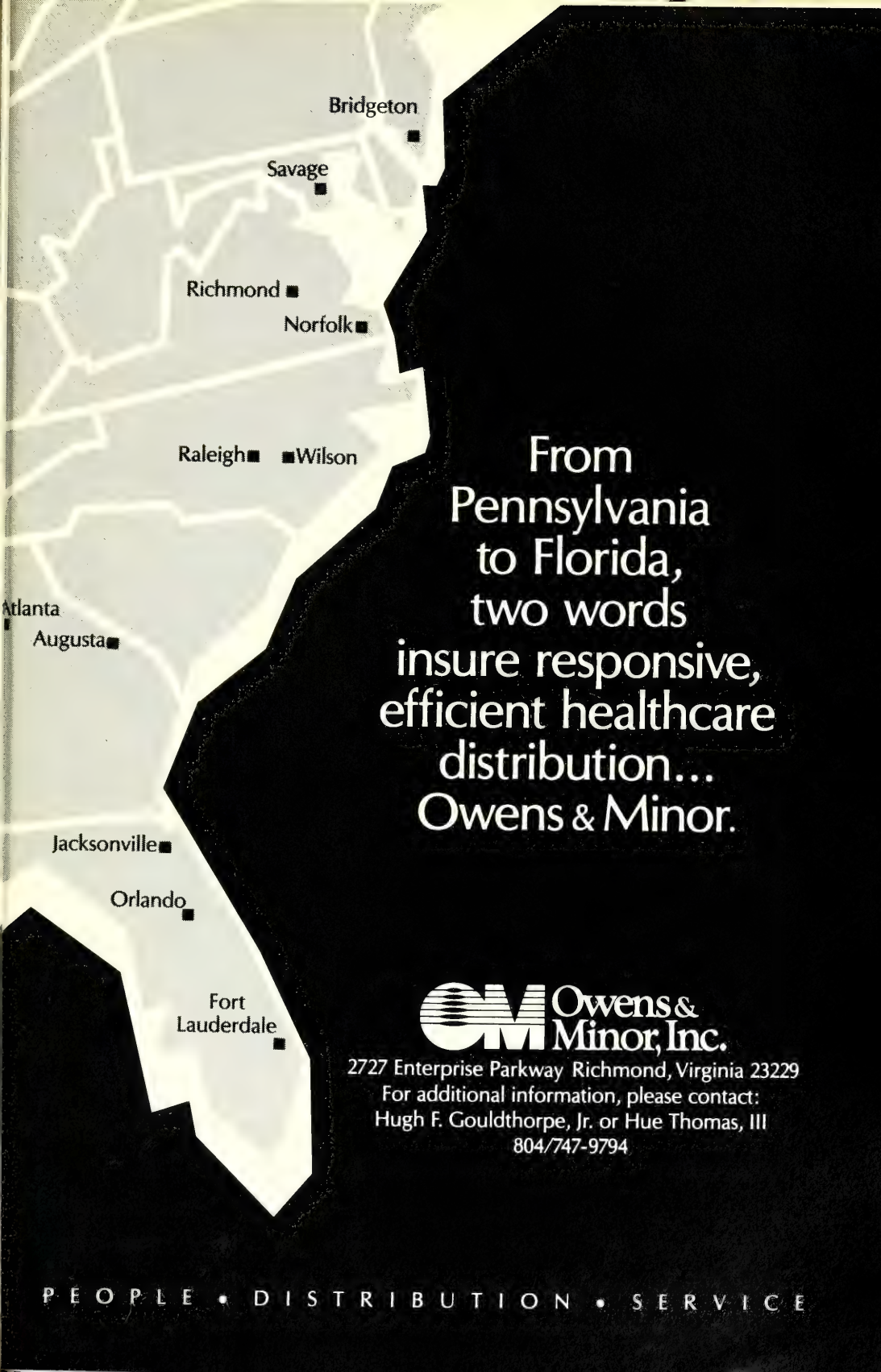

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NOVEMBER 1988 VOLUME 68 NUMBER 11

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Governor Jim Martin (right) presents the 1988 Pharmacy Week proclamation to NCPhA President Al Lockamy. See Highlights of Pharmacy Week '88 on pages 14-15. See also the 1988 SALARY SURVEY of N.C. Pharmacists on page 7.

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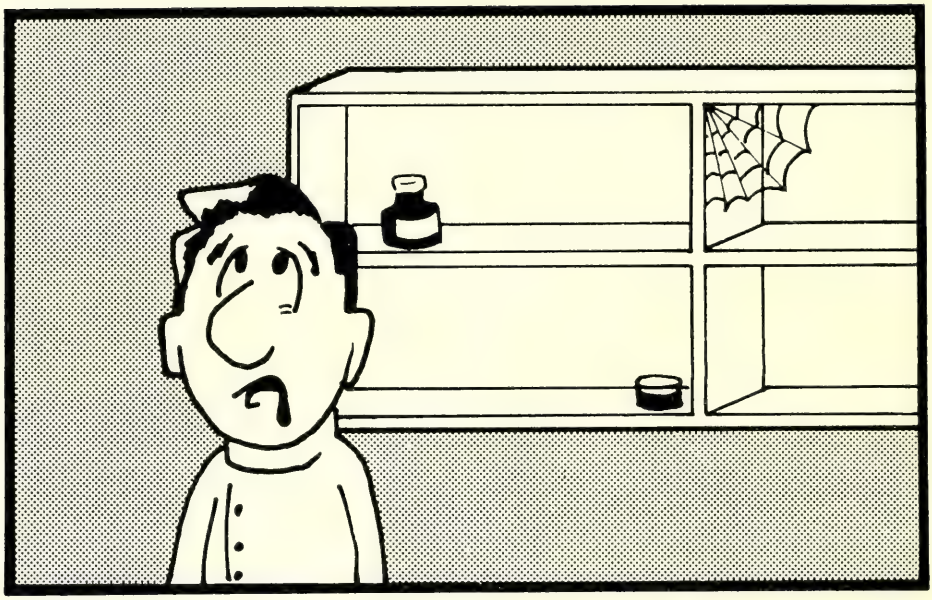

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Their diverse ideas help keep us in touch with the pharmacy profession.

Every summer, they bring us the benefit of their years of experience. They're our Pharmacy Consultant Panel.

They come from all over the country, from a variety of disciplines. They come to talk, to listen, and to share their enthusiasm for a profession that's seeing its responsibilities grow to meet its capabilities.

The 1988 Pharmacy Consultant Panel:

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Assistant Director of Pharmacy for Clinical Services & Research
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M. Patricia Lee
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PRESIDENT'S REMARKS

October was a busy month in the young life of your President.

NARD CONVENTION

We flew to Atlanta to take part in the 90th Annual NARD Convention and Trade Exposition held in the Georgia World Congress Center October 9-13. "Winning Together in 88" was the theme and there were plenty of tar heels in attendance, from academia, industry, and retail pharmacy. It was good to see Dr. Jean Paul Gagnon who came from Marion Laboratories in Kansas City to present a program on spreadsheets and their use in community pharmacy planning. Dr. Jan Phillips, from UNC CH, was there in her role as NARD faculty liaison, enjoying her first NARD convention. There were more than twenty five from North Carolina or with North Carolina roots in Hotlanta. NARD presented a winning lineup of educational seminars and workshops designed to fit the needs of the retail pharmacists. We were proud to see Whit Moose installed as Second Vice President under the ever watchful eye of NARD Past President Jesse Pike. Among the major topics discussed in the programs was the implementation of the recently passed Catastrophic Health Plan and how it would affect pharmacy. Wilmington's David Brinkley gave his opinions on the state of the world and the election outcomes and what will happen then. Stew Leonard Jr., president of Stew Leonard's, a Norwalk, Co. food store, made a great talk on customer satisfaction and employee attitude development to accomplish this. Entertainment was first class, featuring headliners Lewis Grizzard, Tony Bennett and George Kirby who doubled as a program on drug abuse, from personal experience.

PHARMACY WEEK

North Carolina Pharmacy Week involved many pharmacists in NCSHP and NCPhA and I thank all who participated for their time, energy and ideas. In particular, the Steering Committee of Linda Griffin, William Hudson, and Leslie Mackowiak, helped of course by NCSHP President Pam Joyner. Pharmacy Week is further highlighted in this issue of the *Journal* beginning on page 14. Special thanks to Glaxo Inc and Burroughs Wellcome Co. for their assistance, financial and advisory, which helped make Pharmacy Week a success.

SOUTHEASTERN CONFERENCE ON PRESCRIPTION DRUG ABUSE

The Fifth Annual Conference was held on Shell Island, Wrightsville Beach on October 19-21. The objective this year was to develop a policy to

1. prevent diversion of prescription drugs from their intended medical purpose,

2. recognize physicians', pharmacists' and nurses' responsibilities and liabilities regarding Controlled Substances, and

3. develop methodology for addressing prescription drug abuse problems by patients, employees/colleagues.

Speakers included President of the American Medical Association, Dr. James E. Davis from Durham, Charles Dunn, Deputy Director of the North Carolina State Bureau of Investigation and representatives from the Food and Drug Administration, the Drug Enforcement Administration and the National Institute of Drug Abuse. Special concerns for pharmacists were the potential that emphasis will be directed at prescription drugs diverted to street use. The feds want to be able to track all manufactured control substances and their distribution. One onerous possibility is triplicate prescription forms mandated, prepared, distributed and monitored by a state agency. Another equally distasteful idea is federal total control in the monitoring of prescribing of controlled substances. We must be ever cautious and alert to any new proposed legislation that might appear in the U.S. Congress.

Happy Holidays!
Al Lockamy, Jr.
President

Chris W. Warner, Ph.D.
Associate Director, Clinical Development, Glaxo Inc.;
United Way Volunteer;
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*Wiggins, Steven N. "The Cost of Developing a New Drug," Pharmaceutical Manufacturers Association, Washington, D.C., June 1987

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SALARY, BENEFITS, AND JOB SATISFACTION OF NORTH CAROLINA PHARMACISTS*

Chadamas Annavadhana and Jan Hirsch Phillips

In the spring of 1988 the fourth salary and benefits survey organized by the School of Pharmacy, University of North Carolina at Chapel Hill, in conjunction with the North Carolina Pharmaceutical Association (NCPhA) was conducted.

The purpose of the study was (1) to examine pharmacists' salaries, benefits, working conditions, and job satisfaction, and (2) to compare the results with the data obtained from the previous studies in 1978 and 1980 to investigate a 10-year trend in these aspects of practice.

METHODOLOGY

A questionnaire was mailed to 1,000 randomly selected pharmacists registered with the North Carolina Board of Pharmacy. Each pharmacist was asked to respond to 75 questions concerning job characteristics, economic benefits, demographic characteristics, and job satisfaction.

RESULTS

The total number of questionnaires returned to the School of Pharmacy was 402. Of these, 38 were unuseable because the respondents either did not complete all or most of the questionnaire or did not currently practice in the state of North Carolina. This resulted in 364 useable questionnaires, or a 37.8% response rate.

Respondent Characteristics:

The composition of male and female respondents was only slightly different from the 1978 and 1980 studies. In 1988, there was a significantly higher percentage of female respondents than in 1978 and 1980. The ratio of male and females respondents was two to one. Only 15.7% of the respondents were 30 years old or younger, compared to 39.7% and 38.7% in 1978 and 1980, respectively. Approximately two-thirds of the respondents had been in practice for more than 10 years.

Pharmacists who returned the questionnaire were working in chain (40%) more than hospital (24%) and independent pharmacies (26%) (A chain pharmacy consists of four or more units under the same management). About 14.7% of the respondents (approximately 40%) were in managerial positions as opposed to non-managerial positions (35%). The length of time in the present employment of the respondents was fairly equally distributed among less than 2 years, 2 to 5 years, 6 to 10 years, and 11 years or more.

Profile of Pharmacy Practice:

The average number of hours worked per week by respondents in this survey was 41, compared to 44 hours in the 1980 survey. However, the number of evening hours worked per week (7.2 hrs.), the number of Sunday hours worked per month (8.8 hrs.), and the number of holidays off during the year (3.7 days) were not significantly different from 1980.

About one-third of the respondents worked in pharmacies which had an average prescription volume between 50 and 99 per day, while another one-third worked in pharmacies that handled 100 to 199 prescriptions per day. The remaining one-third were distributed among pharmacies which had under 50 or over 200 prescriptions per day. Most of the job descriptions for pharmacists who completed the questionnaire were oral or oral and written. However, it is noteworthy that approximately 30% (increased from 24.5% in 1980) of the respondents indicated they were not given any kind of job description when they accepted their present position.

Overall, respondents indicated that more time was spent in the performance of professional duties than managerial (i.e. 69% VS 26%). The percentage of time spent in each duty was about the same as that reported in the 1978 and 1980 survey (Figure 1). Pharmacists in independent pharmacies also spent more time in professional duties than hospital and chain. Approximately 17% of the respondents reported they did not work with another pharmacist. More than half of

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**This survey was supported by funds supplied by the North Carolina Pharmaceutical Association, Chapel Hill, North Carolina 27514.*

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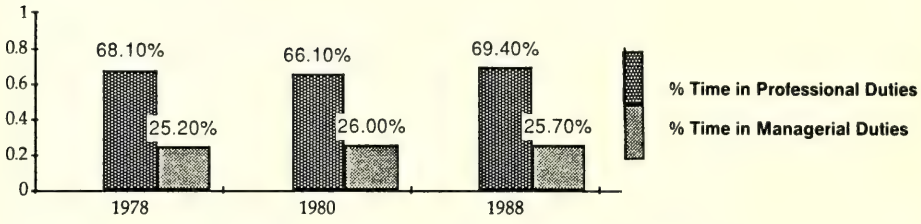

Figure 1. Percent of Time Spent in Professional and Managerial Duties

SALARY, BENEFITS etc.

Continued from page 7

the respondents (53%) reported they worked with only one other pharmacist. The number of respondents who reported they did not work with any technicians increased slightly from the 1980 survey (from 29% to 32%). About 30% of the pharmacists reported working with one technician.

Profiles of Salaries:

Pharmacists working in independent pharmacies and hospitals received approximately $3,000 per year less than their chain counterparts (Figure 2). Pharmacists who worked in other settings such as pharmaceutical industry, HMO, ambulatory care, and health department, etc. reported a higher average salary than those pharmacists working in hospitals, chains, or independent pharmacies. However, a higher standard deviation was also observed, indicating more variance in the data.

It appears that employee pharmacists are financially rewarded when they assume managerial duties (Figure 3). Overall, pharmacy managers received approximately $6,500 per year more salary than a staff pharmacist. When examined by type of practice, the highest difference in salary between a manager and a staff pharmacist was found in hospital pharmacies ($12,400), followed by independent pharmacies ($7,600) and chain ($3,100). All these differences were statistically significant at the 0.5 level.

There are no significant differences in salary levels when cross tabulated by years in practice. It appears that pharmacists in practice for less than two years receive as much as pharmacists who have been in practice for 16 to 20 years. When examined by age category, pharmacists who were 41 to 50 years old reported higher average salary than those in other age group (Figure 4). Pharmacists over 60 years old reported a significantly lower salary than others. Many of the respondents in this age group made a note that they worked at the level that would not exceed the social security limit.

Fringe Benefits:

The types of fringe benefits examined in this survey were hospitalization insurance coverage, major medical insurance coverage, disability

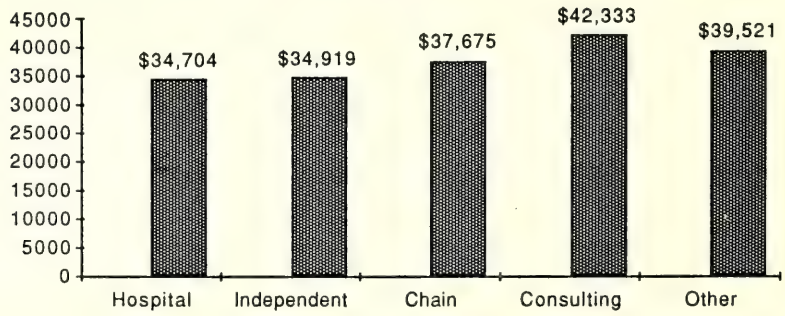

Figure 2. Salary Level By Type of Practice, 1988.

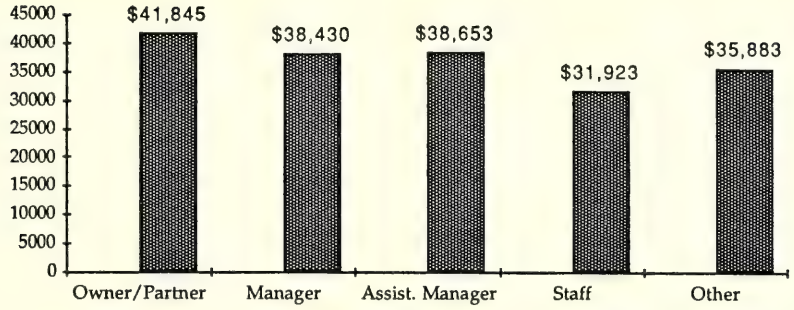

Figure 3. Mean Salary By Employment Status, 1988.

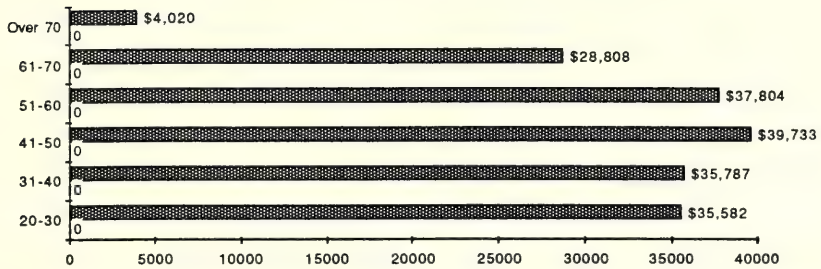

Figure 4. Mean Annual Salary of Respondents in NCPhA Employee Survey by Age, 1988.

insurance coverage, professional liability insurance, life insurance coverage and retirement benefits. As expected, the benefits offered to chain pharmacists were much more comprehensive than those offered to hospital and independent pharmacists. Approximately 80% of chain pharmacists (compared to approximately 35% of hospital and 47% of independent pharmacists) indicated that they received complete family hospitalization and major medical insurance coverage. However, it is a pleasure to note that independent pharmacies have significantly improved their benefits to employees since the last survey. For example, this year, 82.5% of independent pharmacists have professional liability insurance coverage provided by their employers, compared to 74% in 1980.

For every fringe benefit, chain pharmacy employers paid a greater percentage of the cost of their employee pharmacists than did hospital or independent pharmacy owners. The most frequently paid fringe benefit was hospital insurance and major medical insurance, the least frequently paid fringe benefit was disability insurance. Overall, the improvement in benefit coverage over what was reported in 1980 has occurred more among chain and independent pharmacists than their hospital counterparts.

We also examined miscellaneous benefits such as overtime compensation, paid sick leaves, automatic costs of living adjustment, payment for professional organization dues, payment for meetings, etc. We found that chains provided better benefits in overtime compensation, paid sick leaves, and automatic cost of living adjustment. However, for discounts for items purchased and payment for attending meetings or seminars, hospital seemed to be more attractive.

Continuing Education Programs:

Approximately 72% of chain pharmacy employers provided a continuing education (CE) program for their employee pharmacists, compared to 44% and 11% of hospital and independent pharmacy employers, respectively. Most of the employer paid CE are provided at no cost to the employee pharmacists. However, if the CE is not provided by the employer, most chain pharmacists (86%) have to pay for the registration

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SALARY, BENEFITS etc.

Continued from page 9

while only 40% of hospital and 52% of independent pharmacists indicate that they pay for the registration. The majority of chain pharmacists (85%) are not paid while they are off to attend a CE program. The reverse is true for hospital pharmacists.

Respondents' Job Satisfaction:

Chain and hospital pharmacists were less satisfied with their work than employee pharmacists in independent pharmacies. Evidently, the tasks performed by an employee pharmacist in a chain or hospital pharmacy are not perceived to be as rewarding as those in an independent pharmacy. However, chain pharmacists were more satisfied with their pay than other pharmacists. These findings are unchanged when one controls for age or respondents and time in present position. No significant difference in satisfaction with promotional opportunities, supervision, or co-workers was observed between types of practice.

Managers were more satisfied with pay and promotion than staff pharmacists. Pharmacists who were between 31 and 40 years old reported having less satisfaction with work than those in other age groups except those over 70. This finding was different from what had been found in previous studies that younger pharmacists were less satisfied with their work than older pharmacists. This could be explained by the fact that the role that the pharmacist performed had expanded a great deal over the past few years. Recent, young pharmacy graduates may have found these roles challenging and thus were more satisfied with their work than those who had been out of school for a while, who had increased family responsibility, but who had not yet assumed managerial roles. Many of the pharmacists who were over 40, on the other hand, were in positions of authority where they had more input in the decision-making process, therefore, reported higher satisfaction than those aged 31 to 40 years old.

Another interesting finding with regard to pharmacist's satisfaction was that the mean level of satisfaction was lower in this survey than in the previous survey for all facets of work. Satisfaction scores toward pay and promotion exhibited the largest decrease. This finding has important implications for employers attempting to maintain their professional staffs.

Benefits and Salary Crosstabulated by Sex:

As mentioned earlier, male respondents outnumbered female respondents by approximately two to one. Most of the women pharmacists were young. Approximately one-third of women were thirty years old or younger, while a high percentage of men were older. This result would be expected since women in pharmacy are a recent phenomenon.

In this survey, unlike the previous survey, there appears to be a difference in type of practice between sexes. A significantly higher percentage of women work in hospitals and a higher percentage of men work in chain or independent drug stores. This finding is consistent with what has been found in most other states.

The majority of male respondents were working full-time, with only 8% classified as part-time pharmacists. In contrast, about one-quarter of female respondents (24%) were working part-time. The percentage of female pharmacists working part-time has increased about 3.5% since 1980. Due to the difference in work classification between sexes, the results presented in this section are obtained from the analysis of only full-time pharmacists.

Men and women pharmacists who were employed full-time received equal disability and life insurance, sick days, and amount of paid vacation. For hospital and medical insurance, professional liability insurance, and profit sharing and stock option plans, men reported slightly better coverage than women. This could be due to the difference in type of practice distribution between sexes. More men worked in chain pharmacies where these benefits were provided at the higher level than in other practice settings.

More female pharmacists had a paid maternity leave than male pharmacists had a paid paternity leave. Approximately 61% of male respondents, compared to 25% of female respondents, indicated that they did not have this type of benefit.

There was a significant difference in base salaries of men and women, with men earning more as shown in Figure 5. To explore this phenomenon further, we examined employment status and found disparity between sexes. Forty-three percent of women were staff pharmacists while a greater percentage of men (53%) were employed in managerial positions. Since the male respondents were generally older and had been practicing longer than women, a difference in employment status on the basis of length of time in practice would seem appropriate. However, this was not the case. When the length of time in practice was held constant, a difference in employment status remained. Although women

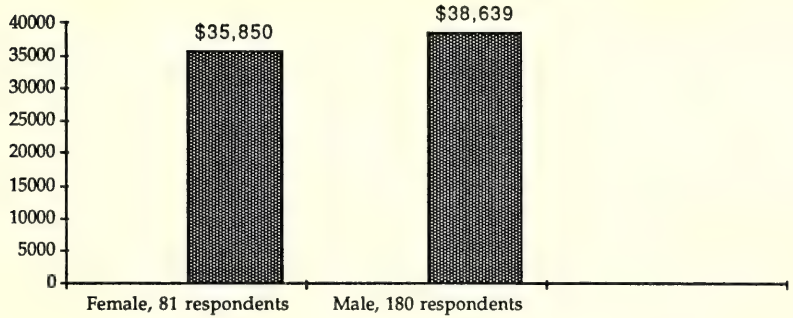


Figure 5. Full-time Respondents' Base Salary by Sex.

do enjoy equal benefits, they earn less money. A primary reason could be their lower employment status. The reason women were not in the higher positions, whether by self-choice or employer-controlled cannot be determined from this study.

The significant difference in salary remained when we performed a regression analysis, holding the number of years in practice and managerial status constant. Other variables that might affect the difference in salary between men and women are: type of practice, age, and number of years in current position. To test if these variables really caused salary difference, we ran a series of regression analysis, holding each of these variables constant, one at a time. Results from these analyses revealed a consistently significant difference in salary between sexes, with women earning approximately $3,000 less than men.

DISCUSSION AND CONCLUSION

We found that in some areas, pharmacist working conditions have improved since the last survey in 1980 (e.g., hospitalization insurance coverage, major medical insurance coverage). In other cases, little has changed (e.g., job satisfaction).

After examining the results, it is not difficult to understand the attraction employment in a chain pharmacy has for employee pharmacists. Salaries are high and more fringe benefits are available. However, satisfaction with work is low. Chain management should work on improving the work satisfaction of their pharmacists in order to maintain their staff. This could be accomplished by giving more managerial or decision-making responsibilities, or increasing schedule flexibility. Allowing employee pharmacists to have input in setting their working and vacation schedules could also improve job satisfaction.

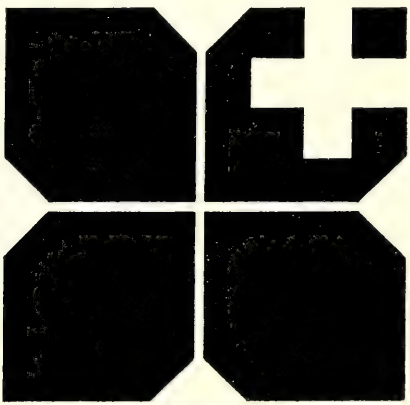
Although the results of this survey indicate that fringe benefits offered to independent pharmacists have improved significantly since the last survey, they are still less attractive than those provided in hospital and chain pharmacies. In addition, independent employee pharmacists are paid a lower salary than chain or hospital pharmacists. Despite these disadvantages, pharmacists working in independent drug stores have the opportunity to own their own pharmacy. It is possible that they are foregoing high salaries and benefits in lieu of becoming the future owner of the pharmacy in which they are presently employed. Independent pharmacy owners should not rely too heavily on this tactic for controlling employee salary levels because the number of independent pharmacies is declining and there is the danger that because of fewer jobs, lower salary levels and inadequate fringe benefits, quality employee pharmacists will not be attracted into independent pharmacies in the future. Independent pharmacy owners should continually examine their employment benefit package and salaries to remain competitive in a dynamic marketplace.

For hospital pharmacists, little improvement, if any, has occurred in benefit packages since the last survey. Moreover, satisfaction with work is low. Work satisfaction could be improved by engaging more in professional duties or expanding the roles they perform.

Lastly, the finding that about a quarter of women (24%) in this study work part-time coupled with the tremendous increase in the number of women entering the profession raises questions concerning the pharmacy personnel needs of the future. It is possible that we may experience a shortage of pharmacists despite an increasing number of pharmacy school enrollments. An important determining factor will be whether or not women working part-time reenter the profession on a full-time basis in the future.

GEER

WE BRING YOU THE BEST



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HIGHLIGHTS OF PHARMACY WEEK, 1988...

...Governor Jim Martin signs proclamation designating October 9-16 as Pharmacy Week '88. (see cover)...

...pharmacists are invited guests on the radio program, The People's Pharmacy...

From left: NCPhA President Al Lockamy; Loni Traylor Garcia, Clinical Specialist, Ambulatory Care at NC Memorial Hospital; radio host, Joe Graedon; Tom Ferguson, M.D., President of the Center for Self-Care Studies, Austin, Texas; and Barry Mangum, director of Pharmacy Clinical Services, Wake AHEC. During the radio program the panel discussed the importance of more and better communication with consumers about their medicines as improper medication use is shown to dramatically contribute to soaring healthcare costs. Additional media coverage was provided by WCHL and WDUR radio and WRAL, WPTF and WTVD-TV stations.

...the annual "Phone-In" was conducted at South Square Mall. This year a "Walk-In" was added...

Standing: Linda Griffin (left), NCPhA Pharmacy Week Coordinator, and Leslie Mackowiak, NCSHP Pharmacy Week Coordinator. Sitting: Steve Davis and Esther Benderson. Pharmacists received 99 phone calls during the Phone-In on October 8, sponsored by NCPhA, NCSHP, and Glaxo, Inc.

PHARMACY WEEK '88

Julie Krainiak uses the Micromedex, an automated information retrieval system to assist her in answering her caller's question; Steve Davis is also pictured here.

MANY THANKS TO THOSE WHO PARTICIPATED IN THE PHARMACY WEEK '88 PHONE-IN/WALK-IN!

Leslie Mackowiak
Karen Vick
Becky Rowell
Jennifer Chapin
Nancy Allen
Ingrid Christensen
Steve Davis
Karen Nabors
Dennis Pfeiffer
Georganne Sebastian
Linda Griffin
Dan Mitchell
Patti Pozella
Julie Krainiak
Esther Benderson
Bill Hudson
Marsha Rumbaugh
Terry Moore
Kathryn Jefferson
Al Lockamy
Joey Pippin
Evan Gothard
Scott Ballenger
Jennifer Lane
Ruth Prescott
Sandra Hak
Pam Joyner

What did you, your pharmacy or organization do for Pharmacy Week '88? Share it with us!

UNC Students, (from left) Joey Pippin, Jennifer Lane, and Scott Ballenger are preparing to greet and direct Walk-In visitors

THE LOWER RESPIRATORY TRACT—

More vulnerable to infection in smokers and older adults

Experience counts

Ceclor® Pulvules® 250 mg
cefaclor

think of it first

Lilly

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CR-5010-B-849345

For respiratory tract infections due to susceptible strains of indicated organisms.

See adjacent page for brief summary of prescribing information.

Ceclor®
cefaclor

Summary.
Consult the package literature for prescribing information.
Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci)
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.
Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
Precautions:
• Discontinue Ceclor in the event of allergic reactions to it.
• Prolonged use may result in overgrowth of nonsusceptible organisms.
• Positive direct Coombs' tests have been reported during treatment with cephalosporins.
• Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.
Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
• Gastrointestinal (mostly diarrhea): 2.5%
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
• As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
• Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
• Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.
Abnormalities in laboratory results of uncertain etiology:
• Slight elevations in hepatic enzymes.
• Transient fluctuations in leukocyte count (especially in infants and children).
• Abnormal urinalysis; elevations in BUN or serum creatinine.
• Positive direct Coombs' test.
• False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).
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CALENDAR OF EVENTS

1988

November 5, 1988 — NCPhA Endowment Fund Dinner, Kenan Center

November 9-13, 1988 — ASCP Annual Meeting, Las Vegas, Nevada

November 14, 1988 — Board of Pharmacy Reciprocity Examination

December 4-8, 1988 — ASHP Midyear Clinical Meeting, Dallas, TX

1989

January 7, 1989 — Campbell University School of Pharmacy spring classes begin

January 17, 1989 — UNC-CH School of Pharmacy spring classes begin

January 23-24, 1989 — Board of Pharmacy Licensure Examination

February 2-3, 1989 — NCSHP Winter Meeting, High Point, NC

February 10-12, 1989 — Pharmacy Leadership Forum, Southern Pines, NC

February 23, 1989 — NCPhA Socio-economic Seminar, Greensboro, NC

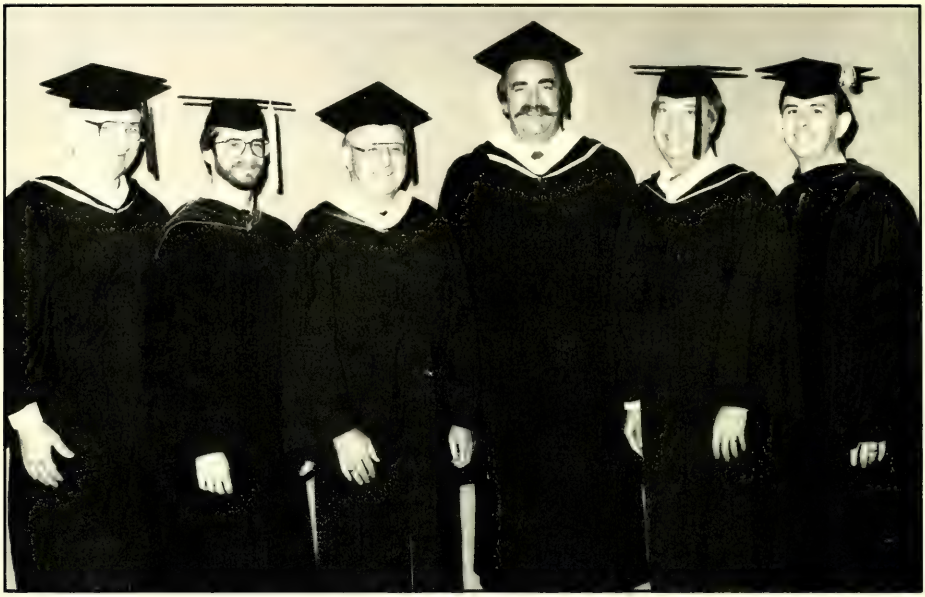
March 19-25, 1989 — NATIONAL POISON PREVENTION WEEK

April 8-13, 1989 — APhA Annual Meeting, Anaheim, CA

May 17, 1989 — NCPhA/NCSHP Management Seminar, North Myrtle Beach, SC

May 17-21, 1989 — NCPhA Annual Convention, North Myrtle Beach, SC

June 4-8, 1989 — ASHP Annual Meeting, Nashville, TN



LOCKAMY DELIVERS GREETINGS AT CAMPBELL UNIVERSITY SCHOOL OF PHARMACY OPENING CONVOCATION

Al Lockamy, president of the North Carolina Pharmaceutical Association, recently delivered greetings to students at the opening convocation of the School of Pharmacy at Campbell University. Mr. Lockamy (second from right) is shown with other participants in the convocation, which was held on September 8. From left are: William "Bill" Randall, a member of the N.C. Board of Pharmacy; Dr. Bruce Canady, president-elect of the N.C. Society of Hospital Pharmacists; Jack Watts, chairman of the Founders' Committee of the Campbell Pharmacy School and a Campbell trustee; James McAllister, director of Pharmacy Services, Duke University Medical Center (keynote speaker); Lockamy; and Dr. Ronald Maddox, dean of Campbell's Pharmacy School. The Campbell Pharmacy School will graduate its charter class in the spring of 1990. Approximately 180 students are currently enrolled in the school.

RALPH P. ROGERS, JR. HONORED BY MUTUAL DRUG EMPLOYEES

Ralph P. Rogers, Jr., Executive Vice President and Chief Executive Officer of N.C. Mutual Wholesale Drug Company, has retired after more than 26 years of service.

Mr. Rogers was honored with an August 30th pig-pickin' held at Mutual's headquarters in Durham. Employees rapped, roasted, and praised his contributions to the wholesale drug industry. As a tribute, Mutual employees established a loan fund in his name through the NCPhA Consolidated Pharmacy Student Loan Fund. The fund assists pharmacy students in hardship cases to obtain monies necessary to completing their education. In addition, Rogers was presented with light-hearted mementos depicting various memorable events in Mutual's development under his guidance. Mr. Rogers will be retained as a consultant.

Donald V. Peterson, a nineteen year veteran of Mutual Drug, was named Executive Vice President and CEO by the company's Board of Directors effective September 1, 1988.

UNC-CH AND WELSH SCHOOLS OF PHARMACY SUMMER EXCHANGE PROGRAM

Pictured front row, left to right: Lisa Harvey, Dana Roten, Pam Corrigan, Janet Conviser, Leigh Ann Benton, Suzanne Trunk, Ruth Prescott, and Angela Bray. Back row, left to right: Sam Selleck, instructor; David Bailey, Senior Tutor, Welsh School of Pharmacy; Dai John, guide; Paul Spencer, Dean, Welsh School of Pharmacy; Bruce Canaday, UNC School of Pharmacy faculty member.

Eight students from the UNC School of Pharmacy traded places with eight students from the Welsh School of Pharmacy at the University of Wales Institute of Science and Technology (UWIST) in Cardiff during the month of June, 1988. The organizers and students hope it was the first of many such exchanges.

"We'd like to make this an annual occurrence," said Bruce Canaday of the Health Sciences Foudation in Wilmington, clinical assistant professor at the School, and one of the founders of the program. Canaday went to Wales on a faculty exchange sponsored by a grant from Burroughs Wellcome Co. last year and while there, helped lay the groundwork for the summer exchange.

"The proposal for the program stated that if we really want to make a long-term change in the philosophy of pharmacy practice, we need to start with people with unformed ideas; they are much more open to alternative viewpoints," said Canaday. "Students are ideal because they're ready to expand their horizons. Then, twenty years down the road, we hope they will still be open to alternative ideas."

Eight women students from UNC were selected for the exchange on the basis of an essay, a personal interview and their resumes and activity sheets. They paid their own way and spent four weeks in Wales and England, learning about all aspects of the British pharmacy system. They attended lectures, went to practice sites and toured pharmaceutical industries. Along the way, they noticed similarities and differences of pharmacy practice between the U.K. and the U.S.

They all agreed that the standards of quality control are much higher in Great Britain than in the United States. Every hospital they visited had a Drug Information Centre, with a quality control pharmacist on the site.

Ruth Prescott, a 5th year student from New Bern, said she thought the British system lacked adequate patient counseling. "The pharmacies aren't computerized, so questions about records or prescriptions can't be answered."

Lisa Harvey, from Raleigh, agreed that counseling doesn't recieve much attention. "I never saw an area designated for patient counseling. In Boots (a major pharmaceutical firm), they were really busy; three or four pharmacists might fill 2500 prescriptions. It's hard to see how they could do much patient counseling."

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EXCHANGE PROGRAM

Continued from page 19

The students pointed out that there are three classes of drugs in Great Britain: prescription, over-the-counter and pharmacist-dispense. The last category includes drugs like ibuprofen and hydrocortisone, which should include pharmacist counseling at the point of purchase.

They were intrigued by the socialized medicine system and felt it had advantages and disadvantages. Leigh Ann Benton, from Pikeville, said "I think it's a good idea, but it takes so long to be treated. And they choose the person with the best survival chance."

Pam Corrigan of High Point said, "If a man has a heart disease and needs a transplant, if he smokes, he won't be considered."

Jan Conviser of Durham pointed out another disadvantage. "There's lots of paperwork with that system; it's really complicated and it takes about two months to be reimbursed for prescriptions."

British citizens pay a flat rate of about $5.00 per prescription, regardless of the actual cost. Retired people, students, youth, and people with chronic disease pay nothing for their prescriptions.

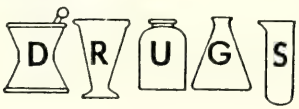
Each student wrote a term paper on some aspect of British pharmacy. Some wrote a comparison of the British National Health Service with the U.S. health care system.

In addition to their work, the students found time to explore the countryside and take in the city lights. Some of their favorite outings included a trip to London to see Les Miserables, excursions to Warwick Castle, "pony trekking" in the Welsh Hills, and John McEnroe, Mats Wilander and Martina Navrotilova play tennis at Wimbledon. Some even saw the Queen in Edinburgh.

The four Welsh men and four Welsh women who came to the UNC School of Pharmacy spent one week in each of four practice sites: Chapel Hill, Durham, Greensboro and Wilmington.

"Steve Caiola, Bob Schollard, Gerald Higa, and Jack Watts supervised the students in their areas," said Canaday.

The two schools plan to do the exchange again next year, but hope to get funding so students who otherwise might not be able to go have an equal opportunity.



Welcome, New Members!

Alicia S. Anderson, Raleigh
Michele Lyn Arling, Chapel Hill
Cynthia Bishop, Charlotte
Tim L. McFall, Madison
Paul Joseph Nunnally, Chapel Hill
John W. Polk, Hampstead
Robin R. Watts, Charlotte
Jean M. Avent, Zebulon
William R. Adams, Jr., Wilson
Caroline Cox, Tabor City
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DICKINSON'S PHARMACY

By Jim Dickinson

NARD's little black box. As you look at the lengthening line of various transaction boxes on your bench top, you might be pardoned for inwardly grimacing at the thought of another one.

But please wait. You could be facing the prospect of sweeping them all out of your pharmacy for ever. All but one, that is — the one we're about to discuss here.

Described by Harry Soza in the September **NARD Journal,** the "box to end all boxes" is actually any box that meets powerful specifications developed for NARD's national PSAO, RxNet, by Preferred Solutions Inc., of San Jose, California. So far, only Verifone's Tranz 330 meets these specifications, but others will surely follow.

RxNet's specifications are the only ones yet written for prescription claims processing, bank cards, Discover and others.

"We're **not** in the black box business per se," RxNet CEO Martin J. Lambert emphasizes; the national PSAO did not want to get caught up in hardware costs, or sales and rentals of hardware. The RxNet **system** for electronic transaction boxes is actually a telephone master switch operated under RxNet contract by Atlanta's BuyPass The System, Inc.

This switch, accessible by any RxNet-certified box, will at last "level the playing field" between independents, chains, and other pharmacies, Lambert believes. It will do this by putting all of them into the same medium of exchange — the box.

The concept is amazingly simple, and revolutionary. Instead of thinking about transactions as **ex**clusionary (do you accept MasterCard, 3PM, Paid, etc.? — tough if you don't), this on-line, singlebox system fosters **in**clusionary thinking by offering equal access to all, including, of course, the bank and other cards.

Logged by phone at RxNet's switch in Atlanta, each vendor's transaction charges are figured automatically, according to what the individual pharmacy has signed up for through their PSAO — and no matter what that is, the single, certified box will do it.

Prescription selling prices, of course, remain where they always were — competitively negotiable, without artificial system exclusions. But now you won't be locked out simply because you can't get in.

You have probably seen this new technology work already in restaurants and some gas stations — no matter what card you have, a single machine reads it and verifies the card's status and credit limit by making a phone call. That call is routed through the master switch or translator service (which gets a fraction of a dollar fee for its work) to the appropriate account.

The all-American spirit of competition is preserved, as it is supposed to be, among the active participants in the system, but competition is eliminated or bypassed where it is destructive to those participants. That is, the old competition among different systems' transmission protocols (baud rates, stop bits, etc.) that used to exclude other systems, now is brought to the party through translator switches, creating the new currency of modern trade, as usable by all as is the dollar.

RxNet's new system will apply the same principles to any pharmacy — chain, supermarket, whatever — and the transaction extracts its royalties, fees and charges (i.e., to the bank, the carrier, the "switch" processor, the phone company, the pharmacy, the PSAO, etc.) as it moves electronically from the box through the BuyPass The System's RxNet switch to its destination. Charges are automatically deducted from your monthly reimbursement check from the PSAO.

NARD has been moved by marketplace realities — the latest of which, of course, is the new Medicare drug legislation — beyond the old exclusionary strategy of trying to lock competitors out of your pharmacy. Now competitors must be **included,** to the extent of using the same electronic "currency" with which all may compete fairly, without hindrance, and on a "level playing field."

The technology that has brought this about is mind-boggling. With fiber-optics and space satellites, credits and debits, Rx eligibilities and ID numbers flash in microseconds through data banks accessed by a dial pad on a single box the size of your hand.

For magnetic striped cards, or the newer laser cards, the process does not even require button-pushing in order to be activated and "on line" for each new transaction. Unstriped cards may be read by their embossed codes, with button-pushing, and cardboard IDs or no IDs can be handled by maximum button-pushing — but all transactions access the same on-line verification

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DICKINSON'S PHARMACY

Continued from page 21

technology.

Once in active mode a mini-screen on the face of the box flashes prompts for each new step of the transaction — the third party payor, group number, Rx number, refill number, days' supply, NDC labeler number, etc., etc. . . .

Because RxNet's system is friendly to all plans — the only limitation being the pharmacy/PSAO contract terms and status — its installation in every pharmacy is only a matter of time. Your biggest problem is likely to be telling which box is truly RxNet-certified and which isn't (RxNet is planning to set up an 800 number for instant verificaitons before you buy or rent a box).

Nobody wants to think about it in such bleak terms, but there will surley come a time when the only pharmacies without "the box" (RxNet-certified) will be those that are out of business.

Did you ever hear someone say pharmacists will never get their act together long enough to survive?

WEDDINGS

LISA MARIE EAST, the daughter of Mr. and Mrs. James R. East of Charlotte, and Brent Alan Mai of Sharon Springs, Kansas, were married on Saturday, 23 July, at Saint Mark's Evangelical Lutheran Church in Charlotte.

The bride is a 1987 graduate of the University of North Carolina at Chapel Hill School of Pharmacy and is employed as the pharmacist/manager of the Brocker Health Center at the University of North Carolina at Charlotte. The groom is a 1985 graduate of The George Washington University in Washington, D.C. The couple lives in Charlotte.

BETH IVEY SMITH of Candor and Joseph Lee King of Seagrove were married on July 16, at 3 p.m. at Candor Presbyterian Church. The bride is a 5th year pharmacy student at the University of North Carolina School of Pharmacy.

ANTHONY BRENT MILLER of Mocksville and Carrie Annette Kurfees of Mocksville, were married on July 30, at First United Methodist Church. The bridegroom, son of Dr. and Mrs. Bayne Miller of Mocksville, is a graduate of UNC-CH School of Pharmacy. He is employed as a pharmacist for Crown Drug, Inc., Winston-Salem. He is also a member of Kappa Psi Fratern ity.

SUSAN ANNETTE HOWES of Raleigh and William Cyde Edwards of Grifton were united in marriage on Saturday, July 30, at 5 p.m. in the First Baptist Church of Grifton. The bride is a graduate of the University of North Carolina School of Pharmacy. She is a staff pharmacist at NC Memorial Hospital in Chapel Hill. The couple plans to reside in Chapel Hill.

SUSAN MARIE PRESTON of Raleigh and David Benjamin Resnik of Chapel Hill were married on August 6, at Pine Valley Baptist Church. The bride, a graduate of the University of North Carolina School of Pharmacy, is currently a staff pharmacist at Eckerd Drugs. The couple will live in Raleigh.

BIRTHS

ROYANNA SLOAN MORRIS and Scott Morris announce the birth of their first child, a son, David Scott Morris, on Saturday, April 23, 1988, at Cape Fear Valley Memorial Hospital in Fayetteville. He weighed 9 lbs and was 21½ inches long. Royanna is a 1986 graduate of the University of North Carolina School of Pharmacy. She is employed by Revco in Fayetteville.

STEVE FURR and **TRACY** announce the birth of their third son, Patrick Evan, born October 7, 1988 in Greensboro. Patrick weighed 8 pounds 12 ounces. Tracy was a former secretary in the NCPhA office. Steve is with Revco Drug Stores

IN MEMORIUM

FOSTER JOEL SIMMONS of Newton died Saturday, September 10, after a period of declining health. He was 90 years old. A 1942 graduate of the UNC School of Pharmacy, Simmons was the former owner of Simmons Pharmacy in Hickory and veteran of World War II, serving in the U.S. Navy.

GUILFORD COUNTY SOCIETY OF PHARMACISTS

The October meeting of the Guilford County of Society of Pharmacists was held on Sunday, October 9, 1988, at Moses Cone Hospital, Room 1040 in Greensboro. The meeting began at 8:00 p.m. The speaker for the meeting was Dr. Daniel W. Teat, Pharm. D., Director of Admissions & Continuing Education, Campbell University School of Pharmacy, Buies Creek, N.C. Dr. Teat's topic was "The Toxicology of Non-Prescription Drugs". The meeting was approved for 2.0 hours of C.E. credit. A short business session followed the program. Members were reminded of the NCPhA Endowment Fund Dinner to be held at the Kenan Center in Chapel Hill on Saturday night, November 5th.

DID YOU KNOW . . .

Total Membership of:
NCPhA — 2554
NCSHP — 741

Total Number of Pharmacies:
licensed in NC — 5909
licensed & residing in NC — 4309

Total Number of Pharmacists in NC — 1733
Community Pharmacies — 1576
Hospital Pharmacies — 157

NEWS BRIEFS

Data compiled by the National Institute on Aging indicate that individuals over age 65, who accounted for 12% of the population in 1985, took 25% of all prescription drugs, dispensed that year. In the year 2040, the institute predicts that 21% of the population will be over age 65 and will take *half of all prescription drugs.*

From the Wall Street Journal comes the question — Why are there no brand name pharmaceuticals that begin with the letter "J"? (Editorial investigation found "Jenamicin," gentamicin, by Hauck and "Janimine," imipramine, by Abbott.)

THOMAS THIELKE ELECTED TO ASHP PRESIDENCY

Thomas S. Thielke, M.S., Director of Pharmacy, University of Wisconsin Hospital and Clinics, Madison, was recently voted President-elect of the American Society of Hospital Pharmacists (ASHP). He will assume the presidency of the 23,000-member organization at the 46th Annual ASHP Meeting in Nashville, Tennessee, in June 1989.

Thielke received both his B.S. and M.S. degrees from the University of Wisconsin School of Pharmacy. Today he holds a position as Clinical Associate Professor of Pharmacy at that school.

Thielke has served as Chairman of the ASHP House of Delegates; chairman of the ASHP Special Interest Group on Administrative Pharmacy Practice and of the Council on Professional Affairs; member of the Council on Education and Manpower and the Council on Clinical Affairs; vice chairman of the Commission on Goals; and president of the Wisconsin Society of Hospital Pharmacists. He is currently a member of the State of Wisconsin Advisory Board on Pharmacy Technician Training Program.

Among the priorities Thielke has set for his term in office will be promoting pharmacy as a clinical profession, enhancing the use of supportive personnel in pharmacy, fostering the growth of specialization, and improving interprofessional communication. Thielke cites a more proactive role for pharmacy in legislative issues at the state and national levels and increased support for programs to recruit students into careers in organized health-care settings as additional key objectives of his presidential term.

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— ARNOLD H. GLASGOW

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April 8–12, 1989 •Anaheim, California

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(SIGNED) A. H. MEBANE III

ERRATA

The following persons were omitted from the 1988-89 Pharmacy Museum Committee roster which appeared in the September issue of The Carolina Journal of Pharmacy. We apologize for this oversight.

Clealand F. Baker
26 Oak Drive
Durham, NC 27707

Tom Cornwell
P.O. Box 790
Morganton, NC 28655

Banks D. Kerr
Kerr Drug Stores
P.O. Box 61000
Raleigh, NC 27661

Charlie Blanton
Rt. 6, Box 93
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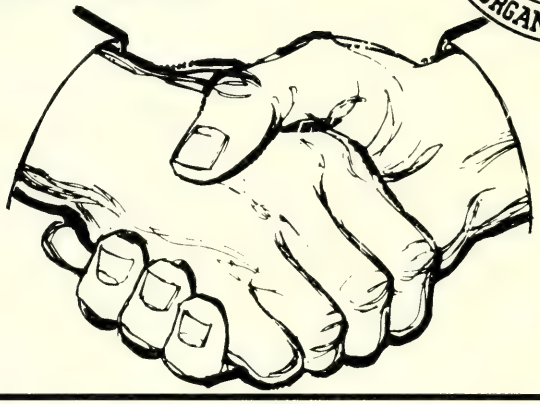

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KPhA DIRECTOR OF PROFESSIONAL AFFAIRS POSITION OPEN

Topeka, Kansas — The Kansas Pharmacists Association is looking for a pharmacist to fill the position of Director of Professional Affairs position. Responsiblities include:

- Serves as Program Director of Kansas Medicaid Drug Utilization Review Program;
- Plans and coordinates the continuing education activities of the Association;
- Manages and coordinates the meetings and activities of several Association committees;
- Serves as Executive Secretary of the Kansas Society of Hospital Pharmacists;
- Edits newsletters and assists in writing Journal articles.

The applicant should be a pharmacist with *strong administrative ability.* The individual should also have good written and verbal communication skills and a thorough knowledge of current pharmacy issues. Compensation will be commensurate with experience.

Applicants should send a resume and a list of references to: Robert R. Williams, Executive Director, Kansas Pharmacists Association, 1308 West 10th Street, Topeka, Kansas 66604, Phone 913/232-0439.

PHARMACIST

Chowan Hospital a progressive 71 acute, 40 SNF bed facility, has immediate opening for Pharmacist. Excellent opportunity to become involved with entire spectrum of hospital pharmacy, full unit dose, IV admixture including TPN, discharge counseling, nursing home consultation, committee involvement. Staff of 2 fulltime RPH, 2 techs. Full benefit package including paid life and disability insurance. Tax Deferred Annuity Program. Support for C.E. programs. Attractive salary. Located in historic town of 5300 people in Eastern North Carolina. Atlantic Ocean is 1½ hours, have abundant fishing, hunting, water activities.

Please send detailed resume and salary requirements or contact:

Wallace Nelson, RPH
Director of Pharmacy Services
Chowan Hospital, Inc.
Edenton, NC 27932
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HOSPITAL POSITIONS OPEN

PHARMACISTS WANTED: Due to expansion, pharmacists are needed 1st and 2nd shifts. Pharmacy is decentralized with unit dose and IV-Admixtures. Other services include: nutrition support and drug information. Salarys are negotiable depending on experience. For more informaiton send resume or call collect: Letha Huffman, NC Baptist Hospital, 300 S. Hawthorne Road, Winston Salem, NC 27103. (919) 748-4717. EOE.

PHARMACIST WANTED: Progressive 170 bed facility nestled in the beautiful scenic mountains of WNC has full-time staff pharmacist position available (would consider temporary). The area offers a wide variety of outdoor sports, social and community activities. Educational opportunities including vocational, crafts, hobbies and the comfort of a warm and friendly community. Easy access to major metropolitan cities in 3 states. Full benefit package including health, life insurance, paid days off plan and TDA. Salary commensurate with experience. EOE. Contact Personnel (704) 837-8161 or send resume to Murphy Medical Center, 2002 US Highway 64E, Murphy, NC 28906.

PHARMACIST WANTED: Iredell Memorial Hospital is a modern, community, acute-care hospital with a reputation for excellence. We are adding new pharmacist positions. New salary scale. Computerized unit dose, IV Admixture services, and therapeutic drug monitoring programs. New graduates are encouraged to apply. Contact Beverly Wilkerson, Director of Personnel or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

PHARMACIST WANTED: To fill recent vacancy on staff of a 333 bed community hospital in Goldsboro, North Carolina and join an eight pharmacist staff in a progressive environment in Eastern NC. Salary offered ranges from $34,382 (new graduate) to $37,918 (with 5 years or more applicable experience) for a forty hour week with every other weekend off. Seriously interested pharmacists should send a resume to: Director of Human Resources, Wayne Memorial Hospital, 2700 Wayne Memorial Drive, Goldsboro, NC 27530.

STAFF PHARMACIST NEEDED: Cape Fear Valley Medical Center is currently seeking a Staff Pharmacist. We offer a challenging career in Hospital Pharmacy for a pharmacist seeking to broaden their professional horizons and use their clinical skills. Qualifications include: North Carolina license. Previous hospital experience preferred, but not required. Cape Fear Valley Medical Center is a progressive, comprehensive 506 bed Medical Center which is dedicated to quality, excellence and compassion. We offer competitive salary and benefits. Send resume to: Cape Fear Valley Medical Center, P.O. Box 2000, Fayetteville, NC 28302, Attn: Personnel.

PHARMACIST: Excellent opportunity for experienced hospital pharmacists to join

the new management team now forming. Positions now open in Charlotte for pharmacists with Unit Dose and I.V. Additive experience. We are adding new services at our 600 bed facility. We offer top salary and a fringe benefit package with opportunities to advance in pharmacy management or clinical practice. For consideration please send resume to Mr. Lou Weaks, Director, Presbyterian Hospital Pharmacy, P.O. Box 33549, Charlotte, NC 28233.

CLINICAL COORDINATOR: Challenging position in a progressive patient-oriented 600 bed hospital for initiation of clinical services. Responsibilities will include developing a formulary, initiating clinical services, etc. Clinical degree required (Pharm.D. or M.S.) with previous experience in a similar position. We are a growth company (HPI) offering top salary, fringe benefit package, and career advancement. For confidential consideration, please send resume to Mr. Lou Weaks, Presyterian Hospital Pharmacy, P.O. Box 33549, Charlotte, NC 28233.

RETAIL POSITIONS OPEN

PHARMACIST WANTED: Pharmacist interested in managing independent store 30 miles north of Charlotte. Closed nights,weekends and holidays. Excellent salary, good benefits and possibility of ownership. Reply to box TBX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

PHARMACIST WANTED: We are seeking an ambitious, and professional career-minded individual for a pharmacist position in Greensboro, High Point and Winston-Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure pharmacy setting". If interested call Lew Thompson at 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke, VA 24038. EOE.

PHARMACISTS WANTED: Drug Emporium, Greensboro, NC now hiring pharmacists. Excellent starting salary. Complete benefit package, plus bonuses included. Call Kent Huffman for details at (919) 282-3993.

PHARMACISTS WANTED: Farmco Drug Centers have present positions available in Rocky Mount, Elizabeth City and Goldston, North Carolina. For more information call collect Buddy Liebowitz at (804) 858-6063.

PHARMACISTS WANTED: Due to rapid growth Kerr Drug Stores now have positions available for pharmacists in Rocky Mount, Tarboro, Raleigh, Fayetteville, Wilson and Aberdeen. Kerr Drug offers opportunity for growth and in store management. Excellent benefits. Send resume to Jackie Gupton, P.O. Box 61000, Raleigh, NC 27661, or call (919) 872-5710.

PHARMACIST WANTED: Pharmacist positions available with ownership privileges. Excellent salary and benefits. Contact Tim Walker at Walker's Pharmacy at (919) 635-9741

PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACISTS WANTED: Full-time pharmacists needed for Eckerd stores in Albemarle, High Point, Salisbury, and Spencer, North Carolina. Interested parties may call (919) 882-8412 or (919) 841-7308 to set up interview date and time.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

PHARMACIST NEEDED: For Rite-Aid stores in Hickory, Boone, Asheboro and Wadesboro areas. For more information contact Jan Musten at (919) 789-4003.

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CLASSIFIEDS

Continued from page 29

PHARMACISTS NEEDED: Independent pharmacy need pharmacist for 1 or 2 days per week, 9-6pm. Pleasant and flexible working conditions. Call 575-6571 Butner.

PHARMACIST WANTED: Excellent opportunity to work in independent pharmacy. Top salary, competitive benefit package, good future. Reply to: Henderson Drug company, 416 Dabney Drive, Henderson NC 27536 or call (919) 438-6137 days/(919) 438-6328 nights.

PHARMACIST WANTED: Full time pharmacist for independent store in the Shenandoah Valley. Paid Insurance coverage. NO SUNDAY HOURS. Please call (703) 635-3115 collect or write W.E. Herr, Jr., Pres., P.O. Box 1277, Front Royal, Va.

PHARMACIST WANTED: Expanding pharmacy has a full-time position immediately open for hospital pharmacist in a 450 bed acute care hospital pharmacy. Attractive salary and benefits with generous shift and weekend differentials. Contact Personnel Office, Cabarrus Memorial Hospital, 920 Church Street North, Concord NC 28025 or call (704) 788-5995.

PHARMACIST NEEDED: Small town conveniently located in North Piedmont. Good hours, no Sundays. Reply to: Box BMM, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

RELIEF WORK

RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call (919) 481-1272 evenings.

NEED A PHARMACIST?: Pharmacist is looking for full-time or relief work in Charlotte area. Call after 7:30 p.m. (704) 553-1924.

RELIEF PHARMACIST AVAILABLE: Live in Chapel Hill. Will travel to any part of state. Retail and clinic experience. Please leave message. 383-1421

FIXTURES FOR SALE

ANTIQUE STORE FIXTURES FOR SALE: Includes display cases, soda fountain, wall fixtures. Contact Charles Chapman at (704) 933-7775.

START YOUR OWN PHARMACY: Complete store fixtures & computer for sale. Building for rent. Location: Best in town. Call Kelly Terceira at (704) 894-8212 or write P.O. Box 368, Columbus, NC 28722.

COSMETIC FIXTURES FOR SALE: Noxell wall units. These are the most popular cosmetic fixtures on the market today. Expandable to 36' length. Black & chrome finish. Comes with interchangable manufacturer signs. Both peg and shelves. Excellent condition. Priced to sell quick. Contact Mickey Whitehead at R & M Mutual Discount Drugs, Ramseur, NC. (919) 824-2151.

FIXTURES FOR SALE: Used drug store fixtures for sale. Call Dale Knight at (919) 494-2287.

FOR SALE: Fixtures, equipment and inventory. All for one price. Make an offer. Reply to Box NRZ, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

USED STORE GONDOLAS FOR SALE: 4 ft. sections manufactured by Childes Equipment and Lozier. 45 sections available at $35.00 a section. Call John Blazek (704) 541-9869.

FOR SALE: Fixtures, equipment, and inventory. All for one price. Make an offer. Reply to Ad No. JTM, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

PHARMACIES FOR SALE

PHARMACY FOR SALE: Owners want to retire. Store 12 miles from Charlotte. Sales $225,000 annually. Inventory $45,000.

Reply to Box ZYX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

DRUG STORE FOR SALE: Established drug store for young pharmacist. Easy operating as one man store. Very reasonably priced. Write Box No. TTT., c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Store location approximately 25 miles from Charlotte. Sales over $1,000,000 annually. Reply to Box VTC, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Pharmacy for sale in Piedmont. Gross sales over $3000,000 a year. Contact Box TVD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: North Carolina or NC triad area. 1½ miles from hospital and MD's. 5 ½-days, no holidays. Sales —$200,000+. Growth potential. Square footage — 1,800 square feet. Call (919) 869-5851 after 7p.m.

PHARMACY FOR SALE: Pharmacy for sale 25 miles from Charlotte located in ½ mile radius of hospital and 15 doctor groups. Inventory in good shape. Accounts Receivable consistant. Equipment very serviceable. Drive-in window. Annual sales in the $280,000's. Call (704) 283-6574 after 7 p.m.

DRUG STORE FOR SALE: Profitable drug store and fountain located in Western North Carolina. Send inquiries to P.O. Box 10, Hendersonville, North Carolina 28793.

ASHEVILLE PHARMACY FOR SALE: In attractive high traffic area. Profitable with Monday through Friday hours. Inquiries: PHARMACY. P.O. BOX 5010, UNIT 101, ASHEVILLE, NC 28813.

PHARMACY FOR SALE - SOUTHERN PIEDMONT — Wish to retire. Gross over $300M year, 40-50% RX. Terms available to qualified person. Call (919) 582-0622,

ASHEVILLE PHARMACY FOR SALE: In attractive high traffic area. Profitable with Monday through Friday hours. Inquires: PHARMACY, PO BOX 5010, UNIT 101, ASHEVILLE, NC 28813.

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NEED A PHARMACIST? NC registered pharmacist residing up state would like to relocate to coastal area between Wilmington and SC boarder. If you need a staff pharmacist, pharmacy manager or store manager I may have the experience and qulaificaitons you are looking for. Would also consider store ownership. Reply to: Box CZY, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST: Professional Services/ Consultation — Temporary and/or Continual. Contact: L.W. Matthews at (919) 967-0333 or 929-1783. 1608 Smith Level Road, Chapel Hill, NC 27514.

PHARMACIST AVAILABLE: NC license. Now working in small township. Would like job in or around Charlotte area. Prefer retail. Computer experience. Send name and telephone number for interview to NWJ, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST OPPORTUNITY: Do you want to stand still as a chain pharmacist. Do you yearn to own your own drug store? Here is an opportunity for you! Coastal NC location, professional practice environment, nursing home provider, computerized pharmacies, option for part ownership. Call Don Heaton at (919) 453-8500 for an appointment to look.

NEW PROGRAM: Pharmacists get in on the ground floor of an exciting program! Varied responsibilities, challenging opportunities for f/t, p/t, or on-call work. Plan your own work schedule. One year

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CLASSIFIEDS

Continued from page 31

current hospital or other pharmacy experience. Send us a letter or a resume. PERSONNEL, P.O. Box 35062, Fayetteville, NC 28303. Phone (919) 323-1956.

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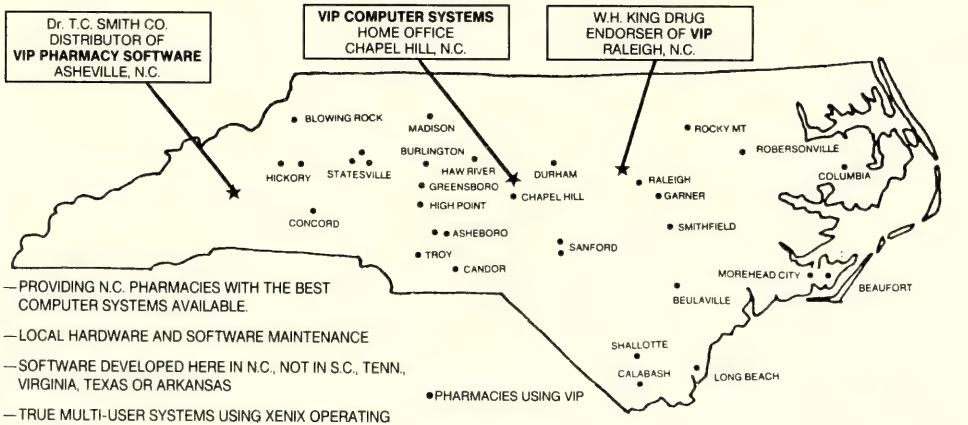

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JOURNAL of PHARMACY

DECEMBER 1988 VOLUME 68 NUMBER 12

Dr. William H. Edmondson, Vice President of Government Affairs for Glaxo, Inc., featured speaker of the NCPhA Endowment Fund Dinner, November 5, 1988. Story on page 6. Photo by Qualex-Colorcraft.

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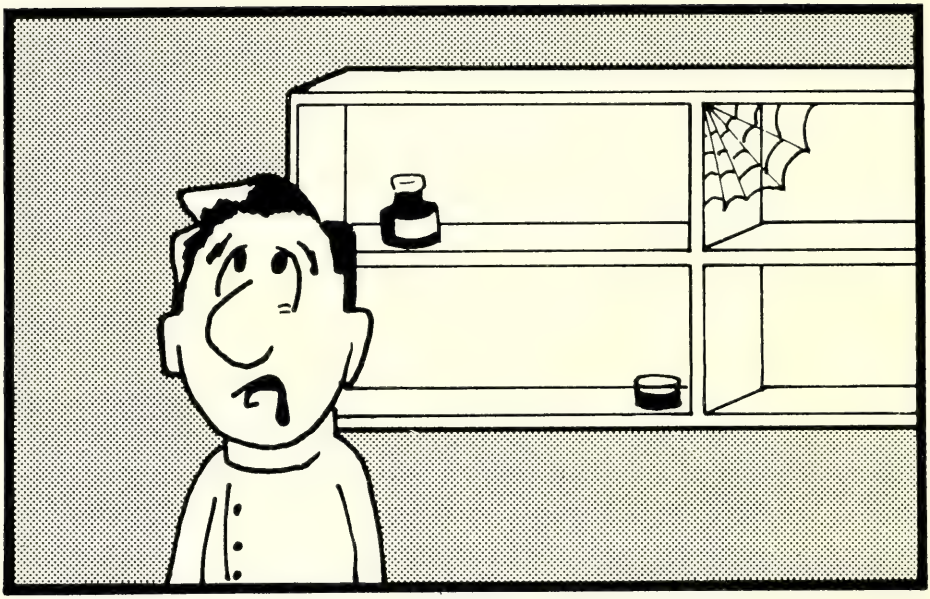

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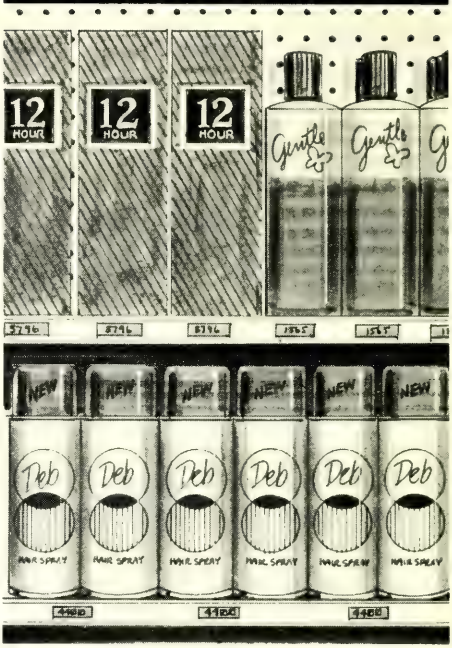

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PRESIDENT'S REMARKS

Pharmacy had a good year in North Carolina. While everything is not rosy and certain segments of the profession are strained to maintain or improve their position in the health care delivery system, most pharmacists are engaged in meaningful practice.

A nationwide survey conducted by Drug Topics which took a look at pharmacists' work attitudes showed that over half of all pharmacists surveyed would opt for pharmacy as a profession again, compared to a similar survey conducted by Drug Topics in 1983 in which less than half would still choose pharmacy.

The survey also revealed that pharmacists share not only education but values and work experiences, as well, even though there are many differences among pharmacists and their work settings. We all joke about the differences between pharmacists in various practice settings, but the Drug Topics survey concluded that, in general, pharmacists feel similarly about professional issues.

That is, independent pharmacists, chain pharmacists, pharmacists in education and industry feel much the same way about professional issues confronting Pharmacy today. Inadequate reimbursement by third party payers, mail order pharmacy, and dispensing by non-pharmacists are some of these issues.

I want to continue to work in a meaningful practice. I'm sure that you do, too.

Thus, as a group united by common sentiments, we must face these issues together and fight them head on. Together we can be a powerful force. Just as our founding fathers fought to establish this great country of ours by believing in, "United we stand, divided we fall," so must we stand together to preserve our profession.

In an address to NCPhA delivered by Dr. Bill Edmondson during the 1988 NCPhA Endowment Fund Dinner, he mentioned that pharmacists must unite with physicians, nurses, hospitals, manufacturers and insurance companies to preserve the health care industry. (*See page 7.*) My friends, we should look in our own backyard first. We need to begin by uniting our own profession.

NCPhA provides all pharmacists the opportunity to work together to preserve and advance the profession of Pharmacy. NCPhA members include pharmacists from any and every practice setting. As strength can be found in numbers we must fight to oppose the threats to our profession together.

NCPhA's membership now stands at 2554. NCPhA ranks fifth in membership among state pharmaceutical associations across the country. I think this speaks highly of our pharmacists in North Carolina. NCPhA is on top thanks to dedicated pharmacists like you who are interested in the future of their profession.

As the new year begins, please join us again by renewing your membership in NCPhA. It's because of you and other pharmacists like you that Pharmacy had a good year in North Carolina in 1988. Let us make 1989 even better!

Happy New Year!
Al Lockamy
President

NCPhA ENDOWMENT FUND DINNER CONTRIBUTORS AND PROGRAM PARTICIPANTS

Photo by Qualex-Colorcraft

From left: L. Milton Whaley, Ralph H. Ashworth, J. Marshall Sasser, and Howard Q. Ferguson. Photo by Qualex-Colorcraft.

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From Left: B.R. Ward, Mitchell W. Watts, W.J. Smith, J. Marshall Sasser, Ralph P. Rogers J.., Albert F. Lockamy Jr., Robert B. Hall, Dr. William H. Edmundson, L. Milton Whaley, A.H. Mebane, Howard Q. Ferguson, and M. Keith Fearing Jr.

GOVERNMENT AND PHARMACY — A "HOUSE OF CARDS"

Dr. William H. Edmondson

Presented at the NCPhA Endowment Fund Dinner, Kenan Center, Chapel Hill, NC, November 5,1988.

It's a pleasure for me to speak to you today. Since I feel that I'm here as a representative of an industry I've been proud to be a part of for my life's work.

You see, although I'm employed by a manufacturer of pharmaceutical products, my platform today is in defense of the entire health care industry. An industry which has grown up around some of the noblest sentiments of mankind: to releive pain, to heal, to defeat death.

The history of health care begins with a link to the spiritual and religious instincts of man. At its best, it deserves a place next to the profoundest beliefs and ideas of mankind.

In the New Testament, Jesus' divinity is established by healing the sick, curing infirmities, and raising the dead.

Although health care has lost its essential link to the spiritual, the elements of the industry as a whole are woven into the fabric of what is best and most honored in our society.

Medical doctors are pillars of society, "My son, the doctor" is the boast of a proud parent, since being a doctor is looked upon as an achievement in and of itself.

The image of a nurse is of a selfless, giving person, not so much rewarded financially, but honored in the way we honor our best teachers, dedicated, essential, members of our society.

Pharmacists are respected and their opinions valued by the average citizen, who come to them as customers. They, too are pillars of society.

The names of the major pharmaceutical companies represent the very bedrock of American business. Companies like Pfizer, Upjohn, Burroughs Wellcome, Lilly, and of course Glaxo. All pillars of society.

The institutions, the hospitals, such as the Mayo Clinic, the Salk Institute, even the building themselves reflect the best and brightest in America.

Each element of the industry works with the others, creating an interdependence.

Let me give you one example of this interdependence. When a company, such as the company I work for, Glaxo, finds and develops new drugs. After an extremely exacting approval process the drug is approved for sale in the United States, usually at a cost of about 125 million dollars. We detail the doctors and pharmacists concerning the merits of the new treatment available to their patients. The doctors, once convinced of the superiority of this new approach prescribe the new medicine for the patient. The pharmacist, also apprised of the healing power of the new product fills the prescription and can offer advice to the patient about how and when to take the medicine and caution him about things he should know to watch for or avoid.

It works great. Unless. Unless confronted with a powerful, destructive force, the pieces can't or won't stick together.

Much like a house of cards that is a symbol to what's happening in health care. I refer to the different groups in health care as "pillars of society."

Pillars of society or a house of cards? It can't be both, can it? It can't.

And, we are at a crossroads right now. We are deciding, or rather we are having a decision made for us, that will profoundly direct the future of health care in America.

It's a decision that we can do something about, if we decide to act, but, only if we decide to act together.

Health care is the Middle East of domestic policy — our health care system consumes one million dollars per minute — politics should be the part-time profession of all citizens — because business and politics are inseparable entities in a democracy and our very survival depends on the quality of our participation.

You see, the powerful force that can turn pillars into playing cards is at work. It's the federal government, it has the power to destroy what has been built over the course of centuries.

In fact, the industry has already begun to fall apart.

And, it is under the impetus of the federal government that the rafters are shaking.

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William H. Edmondson, Ph.D. is Vice President of Government Affairs for Glaxo, Inc., Research Triangle Park. Dr. Edmondson was the featured speaker at the NCPhA Endowment Fund Dinner sponsored by the Board of Trustees of the Endowment Fund on Saturday, November 5, 1988, at the Kenan Center, Chapel Hill, NC. His address is published here.

GOVERNMENT AND PHARMACY

Continued from page 7

Not that I'm blaming the government entirely, mind you, because they may be providing the strong wind that's blowing the walls down. But we in health care have participated in the destruction by not sticking together when the great wind began to blow. It's our response from within the industry that has been so troubling until now.

First, let me explain what the government is doing that has such profound and potentially catastrophic consequences.

Diagnosis Related Groups. In an effort to control the rising costs of Medicare and Medicaid, our congress has come up with a concept that you may know about. It is called, Diagnosis Related Groups, or DRG, and it is the method of payment for Medicare patients.

It works like this: when a patient comes into the hospital he is classified into a DRG. The hospital is paid a fixed amount by Medicare for that patient's treatment, regardless of the actual amount of resources which this particular patient requires. It means that the patient, whose treatment goes well, who is uncomplicated and on schedule is profitable for the hospital. If the DRG anticipates a four day hospital stay, and the patient is able to leave in three days, the hospital pockets the cost of the fourth day.

Of course, if the patient needs to stay longer, the hospital absorbs the cost of the fifth and sixth day and so on.

Industry spokespeople reacted against the plan, envisioning much of what DRG's have indeed brought about.

Effects of the DRG methods. The DRG methods, originally only for Medicare and subsequently adopted for Medicaid and applied to the payment for the prescription drugs these patients require, was soon adopted by the medical insurance industry as a means to help control their costs.

The hospitals began to find themselves caught in a classic bind.

This all came about at a time when the competition for patients was actually increasing. America had overbuilt its hospitals, not unlike a house of cards that's grown too many stories high.

With fewer patients to go around, and this new method of payment for a substantial number of their patients, the hospitals were caught in a squeeze, and a new emphasis on profitability and bottom line financial performance became the singular focus of hospital management.

Hospitals are folding, or being gathered up into large conglomerates like Humana, Hospital Corporation of America, National Medical enterprises, the hospitals began to circle their wagons.

But, sadly, the rest of the health care industry didn't support the hospitals nearly as much as they should have.

The government, after all, was just trying to control skyrocketing costs, the government was just trying to make the hospitals be more efficient with the taxpayers dollars.

The DRG didn't affect physicians or pharmacists or nurses. It was only between the government and the hospitals. Or was it?

When the hospitals were forced to analyze their operations, to find efficiencies wherever possible it had a profound effect on everyone else in health care.

The drugs available in the hospital were subjected to the closest pricing scrutiny. The cost of inventory had to be controlled. If a drug could be proven to be therapeutically superior, it still did not guarantee its availability. Cost became the decisive factor in what should be a medical decision.

The focus of the health care industry was, for the first time, directed away from the patient's welfare and well being and placed on a financial balance sheet.

And, this hasn't only been bad for patients. The hospitals, forced into economies that might not be in anyone's best interest limited the amounts physicians could charge, regardless of the work a specific case required.

Income of health care personnel in decline. Studies indicate that the real income of physicians will decline through to the next century.

Nurses and other hospital staff have seen a decline in real income already, and the result is now showing in nursing shortages all over America.

In one of the wealthiest communities in the nation, Greenwich, CT, the administrator of the town-run Nathaniel Witherell Nursing Home said if steps are not taken soon to attract and keep staff nurses, he might have to shut down a wing of the 200 bed facility. This is happening all across the country.

The nursing staff salaries have fallen far behind the salaries paid in Greenwich's private hospitals.

And, this fact points to an insidious trend in health care.

It is the creation of a two tiered health care industry. One that offers the latest technology, the newest advances, and the finest treatment and

care to those who can afford to pay at rates independent of the government's system of payment, and a second level of health care, for the vast majority of the population, that represents the most cost effective care under the supervision of a federal bureaucracy more interested in cost containment than therapy.

The DRG payment system is consistent with the strategy the government is using to knock down the house of cards that the health care industry has become.

The feds focus on one element of health care, and target it for "improvement." It focuses a public relations attack on that element and then acts with decisive effect to change what the public recognizes as wrong.

All of us heard horror stories about extravagant hospital costs, in amounts that would devastate a lifetime of savings. Hospital costs had to be controlled. DRG was the answer. And, an inadequate and dispersed response from the rest of the industry allowed a chip in the foundation.

And, it's hurt all of us. Physicians, pharmacists, nurses, manufacturers, patients, as well as the hospitals.

This "divide and conquer" approach the government is using works, because it keeps the affected group in the "them" category, when "us against them" discussions of the issues take place.

And, the process is continuing. As part of the catastrophic health care bill, a DRG type payment system to pharmacists for prescription drugs will most likely evolve. Part of the proposal includes a "pharmacist incentive program" with incentives to pharmacists for substituting generic drugs for patients.

This puts pharmacists in the same position the hospitals found themselves with DRG's. The pharmacist's financial viability involves making a medical decision. Do they routinely substitute the federally approved drug for the patient? These drugs are referred to as therapeutically equivalent, but are they?

Many Physicians think otherwise.

Let me give you one example: in Kansas the only state approved drug, which qualifies for reimbursement for patients with severe stomach problems is called famotodine. There are two other drugs which compete with famotodine throughout the country, zantac and tagamet. Overwhelmingly across the nation physicians chose either zantac or tagamet over famotodine. Kansas may consider famotodine therapeutically equivalent, but a majority of physicians don't agree. But, in Kansas, if you want Medicaid to cover the cost, you must substitute famotodine.

Who suffers? The people who sell zantac and tagamet suffer the loss of sales. But, should Glaxo or SKF complain about this, they are characterized by the state health department as exploitive big companies, profiteers. This public relations attack is already in action.

But, far worse, is the suffering of patients, whose physicians aren't permitted to provide them with the best treatment available. On the other hand, if you don't need Medicaid to pay for your prescription medicine, even in Kansas, you can get the treatment your physician feels is best.

How can the government get away with imposing inferior health care? They can, because they are winning the public relations battle. Look at what they're doing for us.

They're lowering the cost of health care. They're reducing the federal budget deficit. They're protecting the people who need the safety net. And, the only people who are being hurt by this progress are the greedy doctors, the greedy pharmacists, the greedy hospitals, the greedy pharmaceutical manufacturers.

The government has sold this message to the general public very successfully. And, the negative impact of what they've done has slipped by the public's attention without great notice.

Take for example, the public discussion of the drug AZT. It's the only drug currently available for the treatment of AIDS, a disease that has attracted considerable media attention and which has struck deep terror into the public consciousness.

AZT is the first drug that offers any hope to someone afflicted with AIDS, but the public discussion of AZT has, to a great extent, been about the tremendous cost of the product.

continued on page 10

Photo by Qualex-Colorcraft.
L. Milton Whaley, Chairman of the Board of Trustees for the Endowment Fund and Master of Ceremonies.

GOVERNMENT AND PHARMACY

Continued from page 9

The government statements have implied that the manufacturer is gouging excessive profits from a tragic situation. They never mention the enormous cost and difficulty involved in the manufacturing of AZT, or the even greater cost of the research and development effort that produced what is still the only hope for AIDS sufferers.

The government pits "us" against "them" and Burroughs Wellcome, is alone as "them."

And where is the rest of the health care industry on this issue? It's hard to know, the silence is deafening, and self-defeating for all of us.

We've let the government divide and conquer.

The government enlists and exploits allies on these questions. For instance, the American Association of Retired People, sensitive to the catastrophic consequences of runaway health care costs, supports this effort by the congress. They understand the benefit of cost control, but they fail to recognize the quality of care repercussions that will materialize down the road.

AARP is an unusually persuasive and powerful lobbying group in Washington. Many of their members are from the generation whose values and fears were shaped by the Great Depression of the thirties. Many of them fear poverty as much as, even more than, death.

And, if any of you have seen the AARP ads on television, you'll know that they represent themselves as a group that acts for all of "us." As opposed to "them." The health care industry.

The AARP is described as the most powerful lobby group in Washington and is second only to the Roman Catholic Church in size.

They championed a senate finance committee proposal that the formula chosen for the Medicare coverage of multisource prescriptions should also be applied to the Medicaid program, "for the sake of consistency between programs." The formula in this case allows Medicare to pay the average wholesale price. This average is determined by adding 50% to the brand name drug to 150% to the lowest priced generic, adding additional weight to the generic side of the equation. **The doctor and the pharmacist are taken out of the equation.**

The response from the industry? Not much, Right now, the catastrophic health care bill has helped shape the health care industry.

And, I'm not comforted by the notion that the Congress of the United States is making this determination.

I've heard it said that a camel is a horse designed by a congressional committee. Just think of the great job they did "simplifying" the tax code. It's so simple now, you have a 30% chance of getting bad information from the IRS about the new, simple rules. And, it's only the first year of the new code, just wait, it'll get more complicated and confusing in time.

We can't let Congress make cost the dominant factor in the quality of health care in the future. Unchecked by a responsible, knowledgeable voice, the Congress can topple the house of cards we've built, because the federal govenment is too big a player to resist without a concerted, unified opposition. No segment of our industry can resist, but all of us, together, might.

Maybe, faced with a disruption of such massive proportions, we can, for the first time stand together to meet this threat. We must present a united front to get the correct message to the public, to warn them about the system that's being put in place right now.

We can't be adversaries at this critical moment in the history of our industry. As Benjamin Franklin once observed, when talking about a different oppressive government, "We must all hang together, or surely we will hang alone."

It's analogous to what happened in the American automobile industry, which thrived in the fifties and sixties with strong union/management antagonism. They've been forced to recognize a commonality of purpose, and a common threat to their very existence. In this survival situation, they are pulling together and responding to the common enemy. We must do the same thing.

When obstetricians in Massachusetts can't take on new patients, because the cost of malpractice insurance is so high, the entire industry should rise up together. Instead of pointing fingers at each other, the insurance companies and physicians should join efforts to demonstrate the folly of the status quo. And the pharmacists, and manufacturers should join the effort. Obviously this situation is untenable, but left alone the doctors, or the insurance companies can be made to look like villains.

The nursing shortage, 13.5% nationwide and growing, is something the entire industry should address. Together. Doctors should be protesting with the nurses. Hospital administrators should be protesting with the nurses. We all should stand together, because maintaining a sufficient number of qualified nurses is essential to quality health care.

The proposals of the health care financing administration concerning the methods of paying for prescription drugs must be opposed by the entire industry. If it's only the pharmacists, or only the manufacturers who speak against these potentially disastrous proposals, "us against them" will isolate and defeat us.

And, a two-tiered system is a defeat for all of us.

There is something we can do about it.

We can start to fight the public relations battle together.

We can start to tell the general public that the quality of the care they'll receive in the future is being decided by their congressmen right now.

We can talk to the congressmen ourselves with a unified voice.

If just those of us in this room today, wrote to our state and national legislators, expressing misgivings and reservations about the catastrophic health care legislation we'd see action.

One North Carolina state legislator told me that he agreed that a piece of legislation threatened the quality of health care, and that the critical factor in his decision was a single, hand written letter he'd received from a voter.

I'm not talking about these form letter mail-in campaigns, but a thoughtful, personal expression of apprehension. It can work wonders.

We can also influence others to do likewise. If the public, all of us, begin to hear about the costs in human terms of the "cost effective" approach to health care, they, too, will begin to express their misgivings.

And, once that begins to happen, the tide will have turned. We will have retaken control of our destiny. And health care decisions will reside with health care professionals, and the patient's recovery will, once again, be the major focus of the industry.

Just as with DRG, the health care financing administration, through their control of how drugs will be paid for, will determine the thinking of how patients will be cared for, and cost containment will be the overriding consideration.

And, once a massive federal bureaucracy is in place, it's unlikely to ever go away, regardless of how unsuccessful it proves.

If the government knocks the legs out from under the manufacturers, who will be the big loser?

Count on basic research suffering. The ability to recoup the massive R&D costs of bringing a drug to market will become a millstone. The breakthrough drugs and medical discoveries will slow down, perhaps even stop.

And everyone will suffer.

We still do have time to act. We still have time to put together and promote a national agenda for all of the professions and institutions that together are the health care industry.

Like the American automobile industry, we're faced with putting together and implementing a survival agenda.

The competitive forces that propelled our industry forward, and ushered in years of unprecedented progress are being threatened. Let's band together and defend what was best in this noble industry.

We are healers. It's time to heal our industry. We have to; the consequences are too great.

But, the good news is that we can do it.

If the physicians begin to act in concert with the needs of the entire industry. And the pharmacists, and the nurses, and the hospitals, and the manufacturers, and the insurance companies, and, yes, even the government.

Then we can rebuild our house of cards which we've let fall into despair. The glue that can bind us together can restore us, heal us, so that even against the mightiest destructive forces, we can stand.

Remember: health care is the Middle East of domestic policy — our health care system consumes one million dollars per minute — politics should be the part-time profession of all citizens — because business and politics are inseparable entities in a democracy and our very survival depends on the quality of our participation.

What do you say?

Are you willing to fight for the best health care possible?

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*Wiggins, Steven N. "The Cost of Developing a New Drug," Pharmaceutical Manufacturers Association, Washington, D.C., June 1987.

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Continued from page 13

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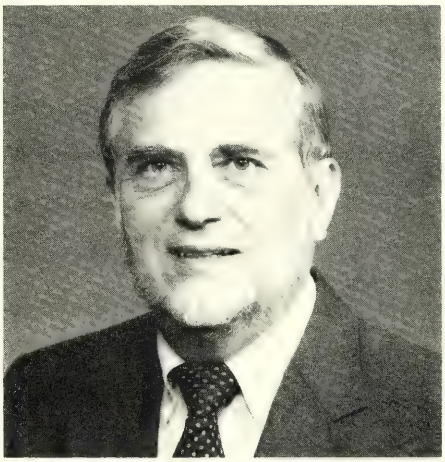
Leadership or "The Way We Do Things Around Here"

Curtis P. McLaughlin

This is the first in a series of articles for professionals who manage and managers who lead professionals and those who are both. Pharmacists operate with one license, but fill many different professional roles in hospitals, chain stores, individual stores, drug companies and universities. Along the way they need a broad variety of management skills. These articles take a broad perspective on management and present a variety of management concepts we hope you will be comfortable applying.



Curtis P. McLaughlin

To this author the purpose of adult learning is to give the decision-maker a wider set of responses to our complex challenges. We have all learned one or two ways to handle a given problem in school or as apprentices. One or two ways isn't enough to handle diverse people. A few simple concepts are not enough to handle complex business situations, any more than aspirin and penicillin are the answer to all disease. They take us along way, but not as far as we expect to go today. We have to add as many approaches as our minds can hold and our personalities can apply. These articles will ask you to look at some old friends — concepts, skills, and approaches — again, but in new ways.

The first topic is that of leadership. I like to call it the "way we do things around here." As the United States has gone through a crisis of confidence, asking why so many other nations can be so productive and why they can have lower infant mortality than we do, the answer comes back all too often — leadership. So often American organizations have been overmanaged and underled. What does it mean to lead? How do you do it?

Leading Professionals

Professionals don't take kindly to being led. As one of my students said, "It's like herding cats." We have all been told how good and how smart we are and how we are learning how to run the big show. We are not likely to let anyone tell us what to do, especially a mere boss.

You lead people, especially fellow professionals, by example and by the pictures that you paint for them. All of us want to live and work in a world that makes sense, not one that is muddled. Organizations can leave life looking muddled. You talk with the boss about a policy and she agrees with your logic. But three days later the written policy comes out and it is very different. Why? Was she lying, is she irrational, or did she get more, different information? Probably the latter, but it sure would be comforting to be sure. Or your boss wants to delegate something to you, but you hesitate, because you don't know how your decisions will be second guessed. Everyone wants help with making sense of the complex work world we function in. Leadership involves helping people make sense.

Even if your management role is a very limited one, like supervising three clerks, you have to make it count. You know they can make independent decisions. You want them to, especially when you are busy elsewhere. So you must give them a picture that tells them how to behave.

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CURTIS P. MCLAUGHLIN is a Professor of Business Administration for the School of Public Health at the University of North Carolina at Chapel Hill. McLaughlin received his masters and doctorate degrees in Business Administration from Harvard Business School. He has written numerous management articles for a variety of publications, including Harvard Business Review, and has consulted for domestic and international corporations. Some of his professional interests include the production of professional services in research, engineering, medicine, public health and education; management of not-for-profit organizations; and productivity improvement.

I sometimes call it "the way we do things around here." Big articles and books call it corporate culture. Very successful chain managers named Eckerd and Walton have made fortunes motivating people, being around them and telling them how it should be. That liberates people to act. The employees don't have to wonder what will happen, if they choose X or they choose Y. They know what is important and what is window dressing. They know when seemingly risky behavior is really risky and when it is not. They can carry out each of their thousands of small tasks in a way that contributes to the movement of the store, the hospital and the corporation.

I often hear managers say that workers will not take responsibility and workers say that they are paid (enough) to take responsibility. People don't avoid responsibility because they are not paid enough. Making decisions is fun. They avoid it because the risks are too great. Manning Nash, the economic anthropologist at the University of Chicago, has written about America's great asset — "freedom to fail." I personally have seen what lack of this great asset does in many parts of the world where success comes with outliving your colleagues and avoiding making a major mistake. You do the latter by avoiding a major decision, so that the politically touchy scholarship application ends up on the premier's desk. Harry Truman used to have a "The buck stops here" sign on his desk. But that works only if the nickel and dime stuff never gets there. I have seen many American managers take risks, get bounced, and get a better job for it. In other countries with high unemployment, few employers, and heavy responsibility to extended family, people would be crazy to take such risks. Not so here.

Reducing the Risk

Much of your leadership task is to reduce that risk, to give people the knowledge, the ideas, the images that serve as a roadmap for them in the workplace. They need to know how they will be judged after the fact. This is the key to delegation. They know that your evaluation will not be just the bottom line, but how they made their decision and how they implemented it. They know that there really is no such thing as the old saw "I don't care how you do it, just get it done." That assumes that everything is a scramble, that you don't want to look at what they are learning in the process. Worse yet, it implies that the organization does not have standards about the way that people, ideas and values ought to be treated. These messages are among the most important that you can send. People want to know how you value people. It is the best indicator of how you will treat them.

We hear lots about the Lee Iacoccas of this world, but most workers take their cues from two people — not the CEO, but the boss and the boss' boss. People will be very interested in what makes you run and in the person that runs you. Words do make a difference, but behavior is the acid test for them. You have to behave like you say and you have to maintain your integrity in their eyes. That means letting them know where you are coming from.

Too many young managers, new to a job, don't communicate where they stand on values. They hesitate, trying to get the lay of the land. In the meantime the workers are reading them, whether they are sending messages or not. The workers begin to attribute values to behaviors and a whole fabrication of attributed values builds up and gets in the way when the manager starts to reveal the plan. Such mixed signals take months to clear away and cost the manager dearly. It is better to show who and where you are up front.

The information they want is about the goals you have set for yourself and for them. It is about how you will evaluate them. It is about how you want to see conflict handled. It is about the behaviors that you will not tolerate and the ones that you will reward. It is about your positive vision for the future. As Stanley Gault, CEO of Rubbermaid phrases it, "You have to set the tone and pace, define objectives and strategies, demonstrate through personal example, what you expect from others."[1]

The Good and Bad of Intuitive Managers

Senior managers often have a major problem with the sense-making aspects of leadership. The psychological pattern of successful senior managers shows them to be intuitive, seeing a picture as a whole and not just as an array of facts. This is a valuable asset to them and to the firm. Yet that picture or "gestalt" is very, very hard to communicate. But, if people need it to make sense, you have to go the extra mile in lining it out, especially if you are an intuitive manager. Just because you see it doesn't mean that even 50% of the people who work for you will. Don't just set it out there, encourage people to ask questions and

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Photo by Qualex-Colorcraft

Hospitality Committee member, Mrs. Douglas (Dollie) Corwin, serves coffee to guests at the Fall Convocation. One of the lovely centerpieces that Dollie prepared for each table is also pictured here.

Photo by Qualex-Colorcraft

Auxiliary members who attended the Fall convocation gather for a group picture in front of the Institute of Pharmacy on a gorgeous fall day.

REPORT OF THE WOMAN'S AUXILIARY FALL CONVOCATION

Photo by Qualex-Colorcraft
Mrs. Allan C. (Rose) Boyd, President

Everyone had an enjoyable day at the Fall Convocation of the Woman's Auxiliary at the Institute of Pharmacy on October 27, 1988. Over 60 members and guests attended. We were delighted to have a large attendance from Campbell University.

The Convocation began with a coffee hour prepared by our hospitality committee: Mrs. Douglas Corwin, Mrs. W.H. Wilson, Mrs. B.P. Woodard, Mrs. Jesse Oxendine, and Mrs. Lamar Morse. Mrs. Corwin also single-handedly prepared lovely centerpieces for each table.

Mrs. Grover Creech gave an inspiring devotional. She used as her topic, "Positive Thoughts for a Healthy Mind." This was in keeping with our theme, "A Healthy Mind in a Healthy Body."

Our speaker was Lieutenant Commander Nancy P. Godbout. She is the Assistant Head for the Pharmacy Department at Naval Hospital in Portsmouth, Virginia. Her topic was "Osteoporosis: What Every Woman Should Know." She showed slides and encouraged us to begin preventive measures while we are young.

We were delighted to hear greetings from Dean Ronald Maddox of Campbell University School of Pharmacy, Associate Dean George Cocolas of UNC-CH School of Pharmacy, President Albert F. Lockamy Jr. of NCPHA, and President Tom Terry of TMA. Also four of our scholarship recipients joined us for part of our meeting. Those who attended were Pamela Jean Duncan, Kevin Lynn Miller, Pamela Jean Sarver, and John Harris Wakeford.

Our speaker, Julia McCullers, who is Director of Planning at Johnston Community College, gave a very entertaining and humorous talk about North Carolina culture. Her topic was "North Carolina as Explained to English Tourists."

It was reported that the Auxiliary has given $300 to Mission Air this year. Mrs. William O'Quinn, Ways and Means Chairman, asked that we support the fund raising projects of the Auxiliary. The Auxiliary has the following items for sale: The Apothecary Kitchen Cookbook, Centennial Wall Hanging Note Cards, and NCPhA Coat-of-Arms Cross-Stitch Kits. Auxiliary members were also asked to get donations for the Walk-A-Thon at the NCPhA Convention in May.

A delicious lunch was served by Baxley's of Raleigh. Mrs. Keith Fearing said the blessing. Following lunch, Melissa Donnell and Ashley Wilson, Personal Consultants from Hudson Belk's Crabtree Valley Mall location, showed fall and holiday fashions. They also talked to us about "Investment Dressing."

Respectfully submitted
Mrs. Allen C. (Rose) Boyd,
President

WOMAN'S AUXILIARY GIFT ITEMS

The Apothecary Kitchen Cookbook @ $5.00 each (+ $1.00 postage and handling).

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Call 1-800-852-7343 or mail check or money order payable to the Woman's Auxiliary, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514. Include return address.

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Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
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• Prolonged use may result in overgrowth of nonsusceptible organisms.
• Positive direct Coombs' tests have been reported during treatment with cephalosporins.
• Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.
Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
• Gastrointestinal (mostly diarrhea) 2.5%
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever) 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
• As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
• Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
• Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.
Abnormalities in laboratory results of uncertain etiology:
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CALENDAR OF EVENTS

1988

DECEMBER: American Lung Association Christmas Seals Campaign

December 4-8 — ASHP Midyear Clinical Meeting, Dallas, TX

December 10 — NCPhA Executive Committee Board Meeting

1989

January 7 — Campbell University School of Pharmacy spring classes begin

January 17 — UNC-CH School of Pharmacy spring classes begin

January 19 — NCPhA's Woman's Auxiliary Executive Committee Meeting

January 23-24 — Board of Pharmacy Licensure Examination

February 2-3 — NCSHP Winter Meeting, High Point, NC

February 10-12 — Pharmacy Leadership Forum, Southern Pines, NC

February 23 — NCPhA Socioeconomic Seminar, Greensboro, NC

March 19-25 — NATIONAL POISON PREVENTION WEEK

April 8-13 — APhA Annual Meeting, Anaheim, CA

May 17 — NCPhA/NCSHP Management Seminar, North Myrtle Beach, SC

May 17-21 — NCPhA Annual Convention, North Myrtle Beach, SC

June 4-8 — ASHP Annual Meeting, Nashville, TN

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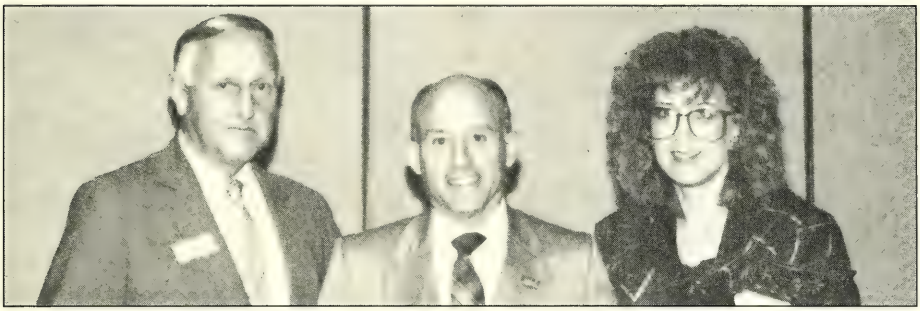

C.B. (Benny) Ridout (*center*) is the recipient of the Merck Achievement Award, presented by Merck Sharp and Dohme Pharmaceutical Company.

Ridout, current president of the Wake County Pharmaceutical Association and pharmacist for 17 years, was selected to receive this honor for excellence in the field of pharmacy. According to Ivey A. McDaniel, Executive Professional Representative of Merck, Sharp and Dohme, (*left*) who presented Ridout with the award at a Wake County Pharmaceutical Association meeting on Tuesday, October 18th, Ridout "has demonstrated, over the years, a conviction to placing the patient first, above all else."

Ridout currently serves in state government as consultant to the medicaid prescriptions program. In this capacity, he functions as a liaison to the North Carolina Board of Pharmacy.

Ridout is the former mayor of Morrisville, North Carolina.

Also pictured is Kathy Havel, District Manager of Merck, Sharp and Dohme.

DICKERSON WILL JOIN 24 WINNERS ON WEEK-LONG TRIP TO MADRID

Bruce Dickerson (left), a pharmacist at Smith Drugs in Elizabethtown, NC receives a free trip to Madrid, Spain from Schering Corporation representative, Ron Rozek, for winning Schering's "Very Important Pharmacist III" Sweepstakes.

Bruce Dickerson, a pharmacist at Smith Drugs in Elizabethtown, NC will join 24 other pharmacists and their guests on a week-long trip to Madrid, Spain for winning the "Very Important Pharmacist III" Sweepstakes promotion sponsored by the Schering Corporation.

To become a winner, Dickerson, a pharmacist for eight years, correctly identified Drixoral as the number one pharmacist recommended over the counter medication for the relief of colds. Smith Drugs was one of 53,000 pharmacies in this country to receive a sweepstakes entry form from the Schering Corporation in June.

Bruce Dickerson, a member of the NCPhA, and his wife, Toni, are excited about their visit to a European country. This trip will give Dickerson a much needed vacation from his very active work and community service schedules. Dickerson serves as a layleader and the vice chair of the administrative council in his church. He is also the vice president of Bladen and Robeson County UNC Alumni Chapter, treasurer of Elizabethtown Commerce and Development Corporation and an organizer of youth sports and educational activities.

WEDDINGS

The wedding of **TAMMY ANN GREEN** and Gregory Mark Gabard took place on September 17 at 7 p.m. in Shady Grove United Methodist Church. The bride is a graduate of the UNC-CH School of Pharmacy and is a pharmacist for Revco Discount Drug Centers. Tammy and her new husband will live in Winston-Salem.

LEAH CLAIRE ROSSER and **GRAHAM TERRELL,** both of Sanford, were married September 17 at First Presbyterian Church. Both are pharmacy graduates of UNC-CH. The bride is a pharmacist at Kerr Drugs and the bridegroom is a pharmacist and store manager at Revco Drug Store. The bridegroom's father is a retired pharmacist. The couple will live in Sanford.

LOIS JANE BROOKS of Wilkesboro and **JOSEPH KIM KOONTZ** of Jefferson were united in marriage on September 10th at Jefferson United Methodist Church. Both are graduates of the UNC-CH School of Pharmacy. The bride is employed by Eckerd Drugs in North Wilkesboro and the groom is employed by Eckerd Drugs in Jefferson. The couple's Jamaica honeymoon was cut short by Hurricane Gilbert. They managed to leave Jamaica and return safely to the U.S. before the hurricane landed on the island the following day.

LORI COLLEEN TUTTEROW and **JOHN ROY SETZER** were married at 1 p.m. on October 16th in Maple Springs United Methodist Church. The bride is a pharmacist and manager for Revco Discount Drug Centers in Oldtown. The bridegroom is a pharmacist and manager for Revco Discount Drug Centers in Winston-Salem. The couple will live in Winston-Salem.

Cane Creek Baptist Church was the setting for the wedding ceremony of **ALISA JOE KENYON** and **CHARLES LEROY HILL** on October 1st. Both are graduates of UNC-CH School of Pharmacy. The bride is employed by Rite Aid and the groom is employed with Peak Drug of Charlotte. After a wedding trip to the New England area, the couple will reside in Charlotte.

Wedding vows of Samantha Cole Beam and **TIMOTHY CRAFT MOSS** were exchanged at First Baptist Church in Cherryville on Saturday, September 17 at 6 p.m. The bridegroom is a graduate of the UNC-CH School of Pharmacy. He is employed by Sentry Drug of Lincolnton. Following a wedding cruise to the Carribean, the couple will reside at 204 Elm Street, Cherryville.

CASSANDRA (CASSY) M. TOWNE and **BILL RICHARDSON** were married July 16, 1988 in Jackson Springs, North Carolina. Both are graduates of the University of North Carolina School of Pharmacy at Chapel Hill. Cassy graduated in 1987 and Bill in 1982. The couple will reside in Greensboro.

BIRTHS

Mary Helen and **SCOTT JOHN ELLIS** announce the christening of their five month old daughter **REBECCA ASHLEY ELLIS,** on November 6, 1988. She is the newest member of the oldest church in North Carolina, St. Thomas Episcopal Church, Bath. Daddy Scott, a 1985 UNC graduate, is the owner/manager of the Pungo River Pharmacy in Belhaven.

ROBERT WILLIAM LENA, 7 pounds 10 ounces was born to **FRANCES RADER LENA** and Manuel P. Lena, Jr., of Dallas, Texas on September 15, 1988. Older brother Charles (18 months) is pleased with addition to the linebacker corp.

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Wake County Pharmaceutical Association

On September 13th, 52 pharmacists enjoyed a delicious meal followed by a presentation and an informative tour of the Bristol Myers plant in Morrisville. The presentation was given by Bristol Myers marketing representative, Terry Gunning, on "Marketing OTC Medications".

Forty-nine pharmacists enjoyed a delicious meal and a most informative program on "Treatment of Hyperlipidemia — New Drug Update" sponsored by Merck, Sharp and Dohme on October 18th at Balentine's Restaurant. John R. Thompson, Pharm.D. from the Department of Family and Community Medicine at Bowman Gray School of Medicine gave the presentation.

For the November 8th meeting, WCPhA pharmacists met jointly with the Durham-Orange Pharmaceutical Association at Burroughs-Wellcome in Research Triangle Park. One hundred fifty pharmacists attended the dinner and program that Burroughs-Wellcome graciously provided.

A Christmas Party is planned for the December meeting. A reception will be held at Ralph and Daphne Ashworth's house followed by dinner at the MacGregor Downs Country Club.

WCPhA is currently promoting a *Design-A-Logo Contest.* The logo will be used to assist in identifying the association on letterhead for newsletters, a banner for special projects, and pins which members may purchase. All Wake County pharmacists are encouraged to submit a logo design for consideration as the winning logo. The winner will be treated to dinner for two at an area restaurant.

WCPhA pharmacists are also finalizing plans for a "Brown Bag Prescription Evaluation Clinic" which will be held on January 13th at the Crabtree Valley Mall. The "Clinic" is a promotional campaign to encourage Wake County residents to seek medication counseling from their neighborhood pharmacist.

MEBANE MEETS WITH STATE PHARMACEUTICAL EXECUTIVES

The American Pharmaceutical Association (APhA), the national professional society of pharmacists, and its Affiliated State Pharmaceutical Association Executives met September 16-19 in Washington to discuss current health care issues of concern to pharmacy.

A.H. Mebane III, executive director of the North Carolina Pharmaceutical Association, was one of the participants at the meeting.

Highlights of the program included remarks by Senator Robert Dole, Senate Republican Leader, and Dr. William Roper, Administrator, Health Care Financing Administration. Issues discussed by the group included freedom of choice, mail order pharmacy, and physician dispensing. Workshops were conducted dealing with Government and Professional Affairs, Membership Marketing, Meetings and Exhibits Planning, Public Relations, and Educational Programming.

Welcome, New Members!

Katherine S. Bryant, Greensboro
Sara Kellye Brown, Chapel Hill
R.F. Cardin, Rocky Mount
Lisa L. Lillie, Sneads Ferry
Barbara Kostic, Asheville
Sandra Griffith, Asheville
Roger W. Queen, Cary
Caren E. England, Wilson
Jan Lineau, Pittsboro
Carol Wynne, Cary
Michael G. Stalvey, Pensacola FL
Cynthia Gacha, Asheboro

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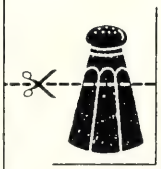


Adding salt to your food could subtract years from your life. Because in some people salt contributes to high blood pressure, a condition that increases your risk of heart disease.

American Heart Association
WE'RE FIGHTING FOR YOUR LIFE

LEADERSHIP

Continued from page 16

you will be amazed how hard it is for some intelligent people to grasp.

The basic study of the Bay of Pigs decision notes that the decision between the invasion and bombing Cuba resolved itself immediately, when Robert Kennedy noted that a bombing raid would make us look like the Japanese did at Pearl Harbor. That is the type of powerful message or metaphor that people are looking to leaders for.

It pays to tell stories. People get a richer picture. They can tailor them to new situations as they come up. Karl Weick, the eminent sociologist, suggests that stories are necessary for organizational reliability and safety. He argues that we cannot train people for every contingency. He has studied air traffic controllers and nuclear power plant operators, looking at safety is often boring, but occasionally high-risk, situations. He argues not for more detailed training, but greater use of stories, of powerful metaphors to get people to stay alert and flexible. He notes that most errors do not arise when we are up to our hips in alligators, but when things are slow and we are less attentive.[2] This can be extended, I suspect, to the pharmacy setting. Give your people visions, stories, heroines to guide them into reliable and productive behaviors. It can promote responsibility, productivity, and safety.

1. Quoted in Kenneth Lablich, "The Seven Keys to Business Leadership," **Fortune,** October 24, 1988, p.60

2. Karl Weick, "Organizational Culture as a Source of High Reliability," **California Management Review,** XXIX, No. 2, Winter 1987, pp. 112-127.

Correction:

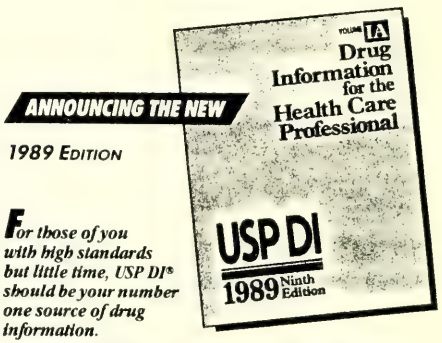
DID YOU KNOW* . . .

Total Membership of:
NCPhA — 2554
NCSHP — 741

Total Number of Pharmacists:
licensed in NC — 5909
licensed & residing in NC — 4309

Total Number of Pharmacies in NC — 1733
Community Pharmacies — 1576
Hospital Pharmacies — 157

**Based on figures collected August, 1988.*



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Dickinson's Pharmacy

by Jim Dickinson

Technicians — or pharmacists? If it seems to the bright young pharmacists of today that it's somehow "mundane" or even "degrading" to fill prescriptions, then maybe it is the bright young pharmacists who are "degrading" — degrading the profession of pharmacy, that is.

That aggressively stated opinion, straight from the lips of pharmacist William Day at the NARD annual convention in October, presents one important aspect of the intensifying controversy over pharmacy technicians.

Another, counterbalancing viewpoint was given by Henri R. Manasse, Dean of the University of Illinois pharmacy school and arguably the profession's most challenging thinker. Describing what he called "appropriate task delegation" in other health fields, he said the time for this is here in pharmacy, too — "we can not expand our practice responsibilities without concomitantly delegating those tasks which can be appropriately delegated to a new occupational class. That class ought to be the **pharmacy technician**."

The two viewpoints dramatize an old, and to some minds, boring professional skirmish that's ecomonically rooted. That older version of the debate has always maintained that you could do away with most of your employee pharmacists if only you could persuade the politicos that technicians count-and-pour, lick-and-stick equally as well as pharmacists for a fraction of the price.

Think of the cost-containment! And there's no doubt that some (non-pharmacist) comptrollers of corporate chains, mail-order firms and HMOs are attracted to the first blush of the concept.

But Day and Manasse were talking about a more sophisticated disagreement on that old theme.

You need to pay attention if you want to see the all-important differences between their positions — and to see the peril to pharmacy if these differences aren't addressed.

First, Day's view actually lauds the act of counting and pouring — the **physical** exposure of the tangible medication to the pharmacist's naked eyes, nose, and maybe fingers as well. This is too important a function and a public protection to be delegated to the unknowing, almost robotic touch of parapharmacists.

Second, Manasse's view is that it's not all **that** important — there are much more important things that expensive pharmacists could and should be doing. Like counseling and advising in a new age of expanding numbers and complex ities of pharmaceuticals. In that context, there's already such a grossly under-recognized shortage of pharmacists that relief through technicians is needed.

Enter a third primary viewpoint, that of Texas Pharmaceutical Association past president Bob Gude at the NARD convention: "I feel that pharmacists should be held legally responsible for counseling patients to the same degree that we are now held legally responsible for identifying and preventing prescribed overdoses. . . . At the present time, while we have the education of a professional, we have the legal status of a technician. That is why so many of us feel threatened by technicians."

So we have a triangle. At one corner is the professional pharmacist's attitude to handling and sensually assessing the potent, toxic dosage forms moving under his or her cognition. At another is the role of professional counselor and advisor about these powerful agents — a role that everyone recognizes is not being fully filled by all pharmacists, for a variety of reasons among which is the lack of time to counsel or advise. And at the third is the law's presently low expectations of pharmacists — a standard that recent decisions are slowly raising, but arguably not as fast as public expectations are rising.

Within the area bounded by the sides of this triangle are the technicians themselves — limited by law, by public expectations, and by pharmacist perceptions.

Journal of Pharmacy Technology editor Pat Dexter, herself a former technician, told NARD there's no need for all the antagonism some pharmacists have.

While a small fraction of the total technician workforce does have professional ambitions these do not include displacement of pharmacists in any work setting. The overwhelming majority of technicians are just passing through (functionary clerks, and clerks who specialize in pharmacy) —as such, they have minimal ambitions so far as learning what real pharmacy is all about and advancing in it.

The "career pharmacy technician," on the other hand, wants to understand pharmacy, and to **support** the pharmacist optimally, through training, education and certification. No survey has ever been done of this breed, to which Dexter belongs, but she's sure they're a tiny minority and that they would not want to displace a single

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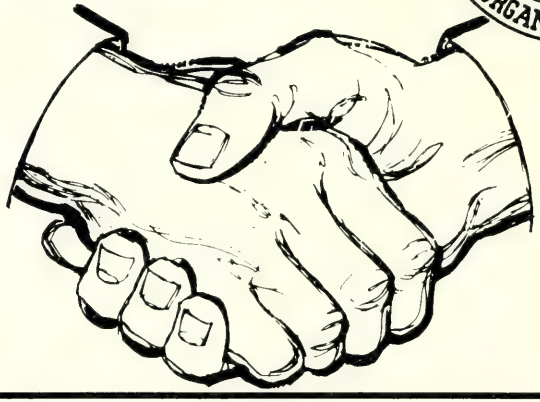

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CORRESPONDENCE COURSE

Advising Consumers on OTC Products for Overindulgence in Alcohol and Food/Alcohol Combinations

by
Thomas A. Gossel, R.Ph., Ph.D.
Professor of Pharmacology
and Toxicology
Ohio Northern University
Ada, Ohio
and
J. Richard Wuest, R.Ph.,
Pharm.D.
Professor of Clinical Pharmacy
University of Cincinnati
Cincinnati, Ohio

Goals

The goals of this lesson are to:

1. discuss symptoms of overindulgence in alcohol or food/alcohol combinations;
2. present OTC products that are safe and effective for treating symptoms of overindulgence;
3. give some background information on remedies purported to prevent inebriation.

Objectives

At the conclusion of this lesson, the successful participant will be able to:

1. differentiate between overindulgence in alcohol and overindulgence from food/alcohol combinations from the symptoms described;
2. state which OTC product ingredients have been shown to be safe and effective for treatment of overindulgence symptoms;
3. cite the reason why certain warning statements must be included on labels of OTC products for overindulgence;
4. cite the reasons why there are currently no OTC products to prevent inebriation; and
5. provide appropriate patient advice to pass on to consumers purchasing OTC products for treatment of symptoms of overindulgence.

The quantity of alcoholic beverages Americans consume has been estimated to be three gallons per person each year. This calculation computes to approximately one ounce of absolute (100 percent) alcohol per person per day.

Psychological and physiological consequences of chronic alcohol ingestion are devastating when one considers the organ degeneration, lost careers, and broken homes. There is no OTC product that will alleviate or minimize the occurrence of the effects of chronic alcoholism.

There is one effect of periodic overindulgence that most persons who consume alcoholic beverages have encountered at least once, and many have experienced on numerous occasions! This is the syndrom of events that often follows overindulgence, i.e., the hangover.

Hangover

The term *hangover* describes a cluster or series of symptoms that occur several hours after ingestion of a "large" quantity of alcohol. *Large* is defined at an amount in excess of that which an individual can tolerate, and his system can metabolize without difficulty.

As defined by FDA, hangover is "a condition consisting of a complex of symptoms involving the gastrointestinal, neurologic, and metabolic systems that follows recent acute ingestion. The

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GEER

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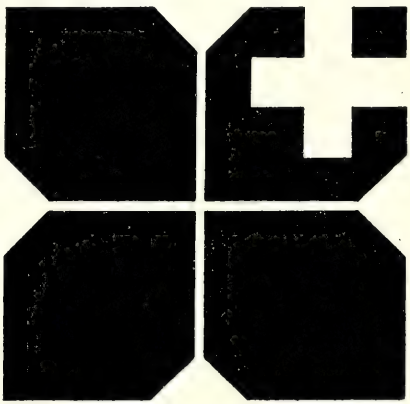

CHARLESTON, S.C.
GREENVILLE, S.C.

CORRESPONDENCE COURSE

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symptoms may include nausea, heartburn, thirst, tremor, disturbances of equilibrium, fatigue, generalized aches and pains, headache, dullness and/or depression or irritability."

A complete profile of symptoms is listed in Table 1. Hangover is not the same as alcoholism, which refers to chronic alcohol ingestion with resultant organ pathology.

Symptoms of hangover involve a number of bodily functions. As stated above, they generally appear several hours after moderate alcohol intake and are most commonly experienced after awakening from an excessive alcoholic beverage intake. The slang expression that describes this is, "the morning after the night before!"

A number of studies with volunteers, and results of numerous surveys have defined symptoms of overindulgence in alcohol, as well as overindulgence from a combination of food and alcohol.

Symptoms fall into four categories or clusters: heartburn, fullness, nausea, and associated nervous problems. It is of some interest that the FDA/OTC advisory panel which looked at the data concluded that there is a significant target population for whom overindulgence is accompanied by a symptom reported as upset stomach.

Another relatively interesting point is that the panel could not find an identifiable single OTC drug product ingredient that relieved all of these symptoms.

Home Remedies

Through the years, a number of home "cures" have been advocated to treat overindulgence and hangover. These included exotic remedies such as owl's eyes and eggs, raw or cooked fish, ashes from various woods, myrrh, wearing a garland of celery or parsley around the neck, rolling naked in the snow, basking in saunas, and sniffing pure oxygen.

Even drinking additional alcohol has been tried following the notion of "taking a hair of the dog that bit you!" Alcoholic-based beverages such as the Bloody Mary, Singapore Sling, and Suffering Bastard reportedly were originated to reduce the intensity of the symptoms of hangover. Research to date has failed to show that alcohol cures or minimizes symptoms of overindulgence or hangover.

OTC Remedies

Americans have self-medicated themselves for overindulgence and hangover for years with OTC products such as Alka-Seltzer (aspirin, sodium citrate), Bromo Seltzer (acetaminophen, sodium citrate), and Pepto Bismol (bismuth subsalicylate). Ingredients in these products are concluded to be safe and effective analgesics (e.g., aspirin and acetaminophen) or antidiarrheals (e.g., sodium subsalicylate).

When the panel reviewed the evidence for these agents to treat symptom clusters, it found much confusion and overlap as far as hangover and overindulgence. *Overindulgence* in food/alcohol combinations normally produces symptoms of upset stomach (primarily heartburn, fullness and nausea) that appear within an hour of consumption and persist up to 24 hours. Symptoms of *hangover,* on the other hand, generally do not appear for several hours to a day.

The panel noted that many of these same symptoms are also produced by other, more serious causes. The conditions may be indistinguishable from each other. For example, nausea may occur in conditions such as uremia, ketoacidosis, hypercalcemia, cerebral edema, peptic ulcer, and cancer. It may be associated with pregnancy, motion sickness, stress, headache, and fright. Heartburn may result from gastric hyperacidity, acute hyperemia or gastritis.

Since these responses are presumably caused by different mechanisms, a product intended to treat symptoms resulting from one cause may not effectively treat similar ones resulting from a different cause.

Therefore, the panel separated the conditions for which these OTC drug products might be used into three distinguishable categories:

1. relief of upset stomach due to overindulgence in food/alcohol;
2. relief of hangover symptoms; and
3. prevention of inebriation.

There was a fourth potential category, prevention of hangover. The panel could find no evidence that any drug would prevent this. Results of the advisory panel's deliberations on the above three categories are presented in Table 2.

The conclusion on combinations of ingredients is somewhat unusual. The panel recommended that combinations are therapeutically better than single ingredient products.

This belief resulted primarily from the clinical experience of panel members. Their view was that people have traditionally found it convenient to treat hangover symptoms with an analgesic for

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CORRESPONDENCE COURSE

Continued from page 31

headache, antacid for upset stomach, and caffiene for fatigue or dullness.

Since other advisory panels had reviewed the previous three drug groups and reported on their effectiveness for the respective symptoms, this particular panel waived the need for clinical studies to document safety and effectiveness for the appropriate combinations as long as they met all the other criteria for Category I status. These criteria included proper labeling and documentation to show that all ingredients add to the total therapeutic activity claimed by the manufacturer. Table 3 lists OTC combination drug products cited as effective in relieving hangover symptoms.

OTC's With Proven Effectiveness

Bismuth Subsalicylate. In 1975, the advisory panel that reviewed OTC gastrointestinal drugs found **bismuth subsalicylate** (active ingredient in Pepto Bismol) to be an effective antidiarrheal in doses of 0.5 to 2 grams taken three to four times daily.

This particular panel also evaluated the ingredient for treating symptoms of overindulgence in food and alcohol. It reported that doses of 325 mg taken up to 8 times daily at intervals of 0.5 to 1 hour (maximum of 4.2 grams/day) are safe and effective for this purpose.

There were some safety concerns regarding bismuth subsalicylate. But the panel rejected their importance stating that the concerns related to different bismuth salts, or subjects taking doses significantly greater than 4.2 grams daily.

One potential toxic action related to bismuth subsalicylate is the possibility of salicylate overdose in persons who take high doses of aspirin concomitantly. In a test that measured salicylate levels following ingestion of Pepto Bismol in recommended doses, an average blood level of 13.7 mg/100 ml was recorded. This was less than the minimum salicylate level (20 mg/100 ml) at which tinnitus (usually the first symptom of aspirin toxicity) appears.

The panel reported that symptoms of overindulgence in alcohol and food represent a temporary condition that only requires short-term treatment. There is little danger involved, but the potential for toxicity nevertheless exists. Therefore, it recommended that the following warning be placed on the label of products containing bismuth subsalicylate: *"This product contains salicylate. If taken with other salicylate-containing preparations, such as aspirin, and ringing in the ears occurs, discontinue use. If taking oral medication for anticoagulation (thinning of the blood), consult a physician before taking this product."*

That warning about not taking the product if the patient is taking an anticoagulant relates to a potential drug interaction between salicylate and warfarin (Coumadin®). Salicylate displaces warfarin from its albumin binding sites, possesses intrinsic hypoprothrombinemic effects (reduced formation of prothrombin), and in acetylated forms (i.e., aspirin) inhibits platelet adhesiveness and aggregation.

All these can decrease clotting mechanisms. Each action is additive to the action of warfarin, and serious bleeding episodes may occur in susceptible individuals. Concurrent use of these agents is not an absolute contraindication but for patient safety, it is best not to self-medicate with salicylates without consulting a physician.

Sodium Citrate. The second drug found to be safe and effective for OTC use in relieving symptoms of upset stomach due to overindulgence in a food/alcohol combination is sodium citrate in solution. OTC products can be marketed as effervescent tablets or granules that are dissolved before ingesting. The citric acid and sodium bicarbonate that comprise the effervescent product are placed in water to release the active ingredients: sodium citrate along with carbon dioxide (the fizz) and other chemicals.

The total daily dose recommended by the advisory panel for persons under age 60 is 17.2 grams, taken in divided doses. The total daily dose for patients over 60 is one-half this, or 8.6 grams. This reduced dosage is necessary because geriatric patients are more likely to experience difficulty excreting sodium from the kidney than their younger counterparts.

Two warnings are required on the labels of sodium citrate solution products. The first is, *"If you are 60 years of age or older, the maximum daily dose should not exceed _____ of this drug."* (The space is to be filled in with the total number of dosage units that comprise the 100 mEq.). The second is *"If you are on a sodium-free diet, do not take this product except under the supervision of a physician."*

The first warns about the total daily limit. The other advises consulting a physician before using the product if the purchaser is on a salt-free diet. This latter warning is suggested because the total doses are 200 mEq and 100 mEq respectively, which is too much sodium for a person on a low-salt diet.

Because pain and/or headache often accompany nausea, heartburn and fullness of hangover and overindulgence, sodium citrate combined with aspirin (e.g., Alka-Seltzer) or acetaminophen (e.g., Bromo Seltzer) have been found to be safe and effective OTC combination ingredients. Again, these must be available in a dosage form that will be taken as a liquid rather than as a tablet or capsule.

The above findings led to a point of controversy. There are some experts who believe that these aspirin/antacid combinations are potentially dangerous to persons who already have gastric upset, because aspirin causes increased gastrointestinal blood loss.

This particular panel and FDA concluded that the gastric erosion caused by aspirin occurs as it crosses the stomach's mucosal cells on its way into the blood. In the presence of a strong buffer (such as sodium citrate), aspirin is converted to sodium acetylsalicylate which is not absorbed by the cells of the gastric mucosa in significant amounts which cause gastric damage.

The panel continued by stating that clinical studies have yet to show significant blood loss, gastric erosion or damage to stomach tissue. It recommended a Category I status for the combination.

The labeling of combination products containing acetaminophen, antacids, salicylates or stimulants must contain appropriate cautionary statements for each ingredient. Those that relate to salicylates are: *"If symptoms persist, or new ones occur, consult your doctor"; "Stop taking this product if ringing in the ears occurs"; "If taking medication for an anticoagulation (thinning of the blood) effect, consult a doctor before taking this drug";* and *"Do not take this product if you are allergic to salicylates such as aspirin."*

For products containing acetaminophen, the recommended warnings are, *"If symptoms persist or new ones occur, consult your physician;"* and *"For occasional use only."*

Can Inebriation be Prevented?

Two substances have been promoted for preventing inebriation. These are activated charcoal and fructose. As far as FDA is concerned, both are safe, but neither has yet been proven effective for this indication.

Activated Charcoal. Activated charcoal absorbs congeners in alcohol *in vitro.* All alcoholic beverages contain congeners, a term meaning "of the same kind." Essentially, congeners provide the characteristic odor, color and taste of the individual beverages. The term *fusel oil* is often used to describe them but this is technically incorrect since fusel oil is officially the oily residue left behind after ethanol is removed from a distillation process.

Alcohol congener content and concentration vary among different beverages, and more than 400 compounds have been identified in various alcoholic drinks. These include acetaldehyde, ethyl formate, ethyl acetate, methanol, n-propanol, butanol, and amyl alcohol.

There is convincing evidence that it is the congeners of alcohol that cause the symptoms of hangover. There is also a strong feeling that they contribute to the overall development of intoxication. For example, one study found a higher incidence of severe hangover in subjects drinking bourbon (greater congener content) than in those ingesting vodka (lower congener content). And when the various congeners are ingested alone, they all produce symptoms identical to those experienced in hangover.

Activated charcoal is safe in antidotal doses up to 120 grams. Its adsorptive action on alcohol *per se* is limited to 300 to 400 mg ethanol per gram activated charcoal *in vitro.* Whether or not significant clinical benefit results with activated charcoal in modifying inebriation has not been shown.

Fructose. Fructose (levulose, fruit sugar) is claimed to prevent alcoholic intoxication. It is safe in oral doses up to 150 gm/day. Fructose is rapidly removed from the blood so it does not affect blood sugar levels, and it does not require insulin for its movement across cellular membranes.

Fructose action on blood alcohol levels has been of interest for almost 50 years. While some clinical studies have assessed fructose response on lowering blood alcohol levels, there are no studies that specifically support its role in preventing inebriation. It has been given orally and intravenously before, during, and after ethanol ingestion. Some authorities report that fructose can enhance elimination of alcohol, most likely by increasing its rate of metabolism. Others dispute this claim and state that any effect it might have on lowering blood alcohol levels is insignificant.

FDA stated its concern that products claimed to minimize or prevent inebriation may actually present a potential health threat. One national group concerned with highway safety reports that each year about 25,000 automotive deaths and

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CORRESPONDENCE COURSE

Continued from page 33

thousands more serious disabilities are due to intoxicated drivers. Such products may impart a false sense of security to persons consuming alcoholic beverages. They drive when they should not and the end result could indeed be disastrous to the drivers and to innocent victims.

Nevertheless, manufacturers have been encouraged to pursue studies to ascertain whether or not activated charcoal and fructose are effective for their claimed indications. At the time of publication of this article, these studies were not in progress.

Consumer Advice

The best advice for treating symptoms of overindulgence and hangover is not to imbibe in the first place! Since this advice is unlikely to be heeded, there are several OTC products that have been found to be effective for the resulting upset stomach and hangover. They include Alka-Seltzer, Bromo Seltzer, and Pepto Bismol.

Taken as directed, these products pose no problems to most individuals. However, people with special medical problems (e.g., those with aspirin sensitivity, patients taking anticoagulants and persons on low salt diets) should carefully read the product labeling to assure that it will not aggravate their conditions.

Geriatric individuals should be reminded that their dosage is less than that of younger persons. They should also inform their physicians that they are taking these products.

CORRESPONDENCE COURSE QUIZ
Alcohol Overindulgence

1. The FDA advisory panel that studied OTC products for treating hangover symptoms determined that:
   a. single entity products are therapeutically better than combination ingredient products.
   b. combination ingredient products are better than single entity products.
2. Sufficient evidence has accumulated to convince the above mentioned panel that all of the following are safe and effective for treating symptoms of hangover EXCEPT:
   a. analgesics.
   b. antacids.
   c. sleep aids.
   d. stimulants.
3. This same panel determined that substances promoted for preventing alcohol inebriation are:
   a. neither safe nor effective.
   b. safe but not effective.
   c. effective but not safe.
   d. both effective and safe.
4. The active ingredient in Pepto Bismol is:
   a. aspirin.
   b. kaolin/pectin.
   c. pepsin/bismuth.
   d. bismuth subsalicylate.
5. The active ingredient in Pepto Bismol is indicated for treating:
   a. diarrhea.
   b. headache.
   c. indigestion.
   d. nausea.
6. Symptoms of overindulgence and hangover are different in that:
   a. hangover appears within one hour of consumption, while those of overindulgence do not appear for several hours.
   b. overindulgence appears within one hour of consumption, while those of hangover do not appear for several hours.
7. The four "official" categories or clusters of symptoms that accompany overindulgence in alcoholic beverages include all of the following EXCEPT:
   a. constipation.
   b. fullness.
   c. heartburn.
   d. nausea.
8. The component of Alka-Seltzer and Bromo Seltzer that is safe and effective for OTC use to relieve symptoms of upset stomach due to alcohol overindulgence is sodium:
   a. acetate.
   b. carbonate.
   c. chloride.
   d. citrate.
9. Of the following, the choice that is NOT a synonym for fructose is:
   a. fruit sugar.
   b. levulose.
   c. milk sugar.
10. According to FDA's definition of *hangover,* the condition consists of all of the following EXCEPT:
    a. depression.
    b. equilibrium disturbances.
    c. organ pathology.
    d. thirst/tremor.

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CONTINUING PHARMACEUTICAL EDUCATION

ALCOHOL AND FOOD/ALCOHOL COMBINATIONS

- Attach mailing label from The Carolina Journal of Pharmacy or print your name and address and mail to CE Test, NCPhA, P.O. Box 151, Chapel Hill NC 27514
- Completed answer sheets may be returned on a monthly or less frequent basis for grading.
- **This is a member service**. Non-members responses will not be graded nor CPE credit provided.
- NCPhA will maintain a copy of your completed CPE tests and upon successful completion of each program, will issue a certificate for one (1) hour of board-approved CPE.
- If more than two questions are answered incorrectly, the test is failed. You will be given one opportunity to submit a second answer sheet.

Please circle correct answers

1. a b c d	4. a b c d	7. a b c d
2. a b c d	5. a b c d	8. a b c d
3. a b c d	6. a b c d	9. a b c d
		10. a b c d

Evaluation: Excellent Good Fair Poor

_____

name

_____

address

DICKINSON'S PHARMACY

Continued from page 27

pharmacist in any facility, such as a mail-order company.

"Mail-order technicians are just clerks," Dexter told me after the convention. "Career technicians just would not ever work in a mail-order facility — at least, I wouldn't!"

So the menacing cloud of technician-driven factories closing out pharmacist career opportunities is fantasy, say Dexter and Manasse.

Gude doesn't go that far, but he says the way to allay pharmacist's fears about it is to legally hold the profession's feet to the counseling fire, to dramatize for all the clear functional — as opposed to educational — difference between technicians and pharmacists.

What is the critical difference that the rhetoric has been obscuring all these years?

It is the **legal** function of pharmacy dispensing. And if that's **only** counting-and-pouring, licking-and-sticking, then dispensing may be "degrading" to an educated, bright new pharmacist. And of course a technician could do it — if the legal responsibilities were rewritten to allow that.

Even without such rewriting, technicians of a kind are probably doing it illegally all the time right now, in certain places.

But if dispensing is all the things that the Henri Manasses and the Bill Days and the Bob Gudes — and you — say it is, then Pat Dexter is right in her reassurances, too. The technician is there to enhance the pharmacist.

I'll give the last word to Manasse, because I think he is right on the button: "I do not believe that we could be meeting the professional service demands of the American public if we did not presently and broadly employ them in our respective pharmacy practices."

This feature is presented on a grant from G.D. Searle & Co., in the interests of promoting the open discussion of professional issues in pharmacy. G.D. Searle & Co. accepts no responsibility for the views expressed herein as they are those of the author and not necessarily those of G.D. Searle & Co.

American Pharmaceutical Association
136th Annual Meeting and Exhibit
April 8–12, 1989

IF YOU ARE INTERESTED IN REPRESENTING NCPHA AS A DELEGATE AT THE APHA 136th ANNUAL MEETING, APRIL 8–12, 1989 IN ANAHEIM, CALIFORNIA, PLEASE CALL MR. AL MEBANE AT NCPHA HEADQUARTERS: 1-800-852-7343 OR WRITE NCPHA, P.O. BOX 151, CHAPEL HILL, NC 27514

American Pharmaceutical Association
136th Annual Meeting and Exhibit
April 8–12, 1989

APPLICANTS SOUGHT FOR APhA EXECUTIVE RESIDENCY

The American Pharmaceutical Asssociation (APhA), the national professional society of pharmacists, is seeking applicants for the 1989-1990 executive residency in association management.

The residency, which begins in July 1989, is a post-graduate training program conducted at APhA headquarters in Washington, DC, and a selected state pharmacy association headquarters.

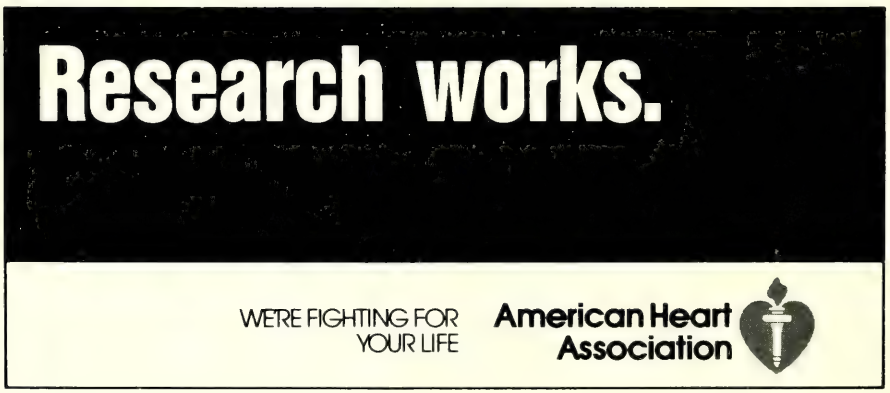
This one year program is designed to provide a quality, dual-site training experience to develop a pool of well-qualified people to assume management positions in pharmacy-related organizations at both the state and national levels.

The resident will spend ten months at APhA headquarters, experiencing all areas of the Association, and then two months at a state pharmacy association.

The resident must be a graduate of an accredited school of pharmacy and be licensed or immediately eligible for licensure following graduation.

Applicants must submit a letter of application explaining why he/she is interested in pursuing the residency, a resume, and two letters of recommendation (one professional and one academic or two professional). The application must be postmarked no later than January 16, 1989.

For further information, contact Dr. C. Edwin Webb, APhA, 2215 Constitution Ave., NW, Washington, DC 20037.



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HOSPITAL POSITIONS OPEN

PHARMACIST WANTED: Iredell Memorial Hospital is a modern, community, acute-care hospital with a reputation for excellence. We are adding new pharmacist positions. New schedule reduces evening and weekend shifts. New salary scale. Computerized unit dose, IV Admixture services, and therapeutic drug monitoring programs. New graduates are encouraged to apply. Contact Beverly Wilkerson, Director of Personnel or Dan Dalton, Director of Pharmacy Services, at Iredell Memorial Hospital, P.O. Box 1400, Statesville, NC 28677 (704) 873-5661. You may call collect.

PHARMACIST WANTED: To fill recent vacancy on staff of a 333 bed community hospital in Goldsboro, North Carolina and join an eight pharmacist staff in a progressive environment in Eastern NC. Salary offered ranges from $34,382 (new graduate) to $37,918 (with 5 yrs. or more applicable experience) for a forty hour week with every other weekend off. Seriously interested pharmacists should send a resume to: Director of Human Resources, Wayne Memorial Hospital, 2700 Wayne Memorial Drive, Goldsboro, NC 27530.

PHARMACIST: Excellent opportunity for experienced hospital pharmacists to join the new management team now forming. Positions now open in Charlotte for pharmacists with Unit Dose and I.V. Additive experience. We are adding new services at our 600 bed facility. We offer top salary and a fringe benefit package with opportunities to advance in pharmacy management or clinical practice. For consideration please send resume to Mr. Lou Weaks, Director, Presbyterian Hospital Pharmacy, P.O. Box 33549, Charlotte, NC 28233.

CLINICAL COORDINATOR: Challenging position in a progressive patient-oriented 600 bed hospital for initiation of clinical services. Responsibilities will include developing a formulary, initiating clinical services, etc. Clinical degree required (Pharm. D. or M.S.) with previous experience in a similar position. We are a growth company (HPI) offering top salary, fringe benefit package, and career advancement. For confidential consideration, please send resume to Mr. Lou Weaks, Presbyterian Hospital Pharmacy, P.O. Box 33549, Charlotte, NC 28233.

PHARMACISTS WANTED: NC Baptist Hospital has openings for licensed pharmacist in the following areas:
Staff Pharmacist: Night shift work 7 days on 7 days off. Flexible scheduling.
Clinical Pharmacist: Needed in a comprehensive regional drug information center. Advanced degree required, residency preferred, training in drug information is beneficial.
We offer very competitive salary with complete benefit package. Interested persons should send resume or call collect. Letha Huffman, 300 S. Hawthorne Road, Winston-Salem, NC 27103 or call (919) 748-4717. EOE.

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CLASSIFIEDS

Continued from page 37

RETAIL POSITIONS OPEN

PHARMACIST WANTED: Pharmacist interested in managing independent store 30 miles north of Charlotte. Closed nights, weekends and holidays. Excellent salary, good benefits and possibility of ownership. Reply to Box TBX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514

PHARMACIST WANTED: We are seeking an ambitious, and professional career-minded individual for a pharmacist position in Greensboro, High Point and Winston-Salem, NC. We offer excellent salary, stock ownership, educational subsidy, extensive benefits, retirement plan, 401K tax plan, annual salary merit reviews. "Pure pharmacy setting". If interested call Lew Thompson at 1-800-233-7018 or send resume to: The Kroger Company, Attn: Personnel, P.O. Box 14002, Roanoke, VA 24038. EOE.

PHARMACISTS WANTED: Drug Emporium, Greensboro, NC now hiring pharmacists. Excellent starting salary. Complete benefit package, plus bonuses included. Call Kent Huffman for details at (919) 282-3993.

PHARMACISTS WANTED: Due to rapid growth Kerr Drug Stores now have positions available for pharmacists in Rocky Mount, Kinston, Raleigh, Fayetteville, Mt. Olive, Charlotte, Durham, Havelock, Clayton and Greenville. Kerr Drug offers opportunity for growth into store management. Excellent benefits. Send resume to Jackie Gupton, P.O. Box 61000, Raleigh, NC 27661, or call (919) 872-5710.

PHARMACIST WANTED: Excellent opportunity to work in independent pharmacy. Top salary, competitive benefit package, good future. Reply to: Henderson Drug company, 416 Dabney Drive, Henderson NC 27536 or call (919) 438-6137 days/(919) 438-6328 nights.

PHARMACISTS NEEDED: For Rite-Aid stores in Hickory, Boone, Asheboro and Wadesboro areas. For more information contact Jan Musten at (919) 789-4003.

PHARMACISTS WANTED: Pharmacist positions available with ownership privileges. Excellent salary and benefits. Contact Tim Walker at Walker's Pharmacy at (919) 635-9741.

PHARMACIST WANTED: Permanent part-time/full-time positions available. Raleigh area. Reply to Box XDL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST WANTED: Position open for registered pharmacist at Triangle Pharmacy/True Value Hardware Store in Durham. For more information contact Chip Smith at (919) 544-1711.

PHARMACIST NEEDED: Small town conveniently located in North Piedmont. Good hours, no Sundays. Reply to: Box BMM, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST WANTED: In an independent pharmacy. No Sunday work. Work only ½ a day on Saturday. Salary negotiable. Reply to: Rhett Butler, R&H Pharmacy, 115 Chesterfield Hwy, Cheraw, SC 29520 or call (803) 537-3912.

PHARMACIST NEEDED: Revco Drug Stores has an opening for a full time pharmacist in Eastern NC. Interested parties please contact Don Hamilton, Revco Drug Store #1126, 114 East 2nd Street, Washington, NC 27889 or call (919) 946-6531.

PHARMACIST OPPORTUNITIES: Excellent environment in which to demonstrate professional skills. Positions available for the very best in many locations in the Carolinas. Excellent compensation and benefit programs including generous bonus and profit sharing. Join the leader in the Carolinas. Call Gary Judd at Eckerd Drugs, (704) 371-8242 to explore mutual interests.

PHARMACISTS NEEDED: Independent pharmacy need pharmacist for 1 or 2 days per week, 9-6 pm. Pleasant and flexible working conditions. Call 575-6571, Butner, NC.

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RELIEF PHARMACIST AVAILABLE: Central & Eastern North Carolina. Contact Pharmacy Relief, P.O. Box 2064, Chapel Hill, NC 27515 or call (919) 481-1272 evenings.

NEED A PHARMACIST?: Pharmacist is looking for full-time or relief work in Charlotte area. Call after 7:30 p.m. (704) 553-1924.

RELIEF PHARMACIST AVAILABLE: Live in Chapel Hill. Will travel to any part of state. Retail and clinic experience. Please leave message. 383-1421.

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ANTIQUE STORE FIXTURES FOR SALE: Includes display cases, soda fountain, wall fixtures. Contact Charles Chapman at (704) 933-7775.

FOR SALE: Fixtures, equipment, and inventory. All for one price. Make an offer. Reply to Box TTT, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

START YOUR OWN PHARMACY: Complete store fixtures & computer for sale. Building for rent. Location: Best in town. Call Kelly Terceira at (704) 894-8212 or write P.O. Box 368, Columbus, NC 28722.

STORE FIXTURES FOR SALE: Lozier store fixtures and shelves. 16 foot prescription counter, 6 foot check-out counter and lighted showcase. Enough to equip Medicine Shoppe floor plan. Excellent condition, priced right at $4500. Call Raleigh Putnam at 919-766-8191 (H) or 919-766-7836 (W).

COSMETIC FIXTURES FOR SALE: Noxell wall units. These are the most popular cosmetic fixtures on the market today. Expandable to 36' length. Black & chrome finish. Comes with interchangable manufacturer signs. Both peg and shelves. Excellent condition. Priced to sell quick. Contact Mickey Whitehead at R&M Mutual Discount Drugs, Ramseur, NC. (919) 824-2151.

PHARMACIES FOR SALE

PHARMACY FOR SALE: Owners want to retire. Store 12 miles from Charlotte. Sales $225,000 annually. Inventory $45,000. Reply to Box ZYX, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

DRUG STORE FOR SALE: Established drug store for young pharmacist. Easy operating as one man store. Very reasonably priced. Reply to Box TTT, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Pharmacy for sale in Piedmont. Gross sales over $300,000 a year. Reply to Box TVD, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACY FOR SALE: Pharmacy for sale 25 miles from Charlotte located in ½ mile radius of hospital and 15 doctor groups. Inventory in good shape. Accounts Receivable consistant. Equipment very serviceable. Drive-in window. Annual sales in the $280,000's. Call (704) 283-6574 after 7 p.m.

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PHARMACIST OPPORTUNITY: Do you want to stand still as a chain pharmacist? Do you yearn to own your own drug store? Here is an opportunity for you! Coastal NC location, professional practice environment, nursing home provider, computer-

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CLASSIFIEDS

Continued from page 39

ized pharmacies, option for part ownership. Call Don Heaton at (919) 453-8500 for an appointment to look.

FOR SALE: Pharmacy computer software package. Includes prescription filling, accounts receivable and accounts payable. Can be expanded to include nursing home, general ledger, etc. Can be expanded to multi-user-multi-tasking. Original price $9,200.00 must sell $4,500.00. For more information call days (919) 483-6748, nights (919) 483-9991.

DOCTOR OF PHARMACY (PHARM.D.): Would you like to obtain a Pharm.D. degree? If you are a recent B.S. Pharmacy graduate, contact the Director of Admissions, Campbell University School of Pharmacy, Buies Creek, North Carolina 27506 or Call (919) 893-4111, Ext. 2262.

PHARMACIST: Pharmacist with 10 years experience in retail and industry. Masters degree in business. Interested in relocating approximately 6/89. Licensed in NC and VA. Interested parties reply to: Box GHC, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

WANTED: Pharmacist wants to buy established pharmacy in Eastern North Carolina. All replies confidential. Reply to Box ACL, c/o NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

WANTED: Tenant for new shopping center to be located in Smithfield NC must be 6,000 to 20,000 square feet. Prefer drug or department store. Interested parties please call (615) 966-5000 Joe Tate, Developer.

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FIXTURES FOR SALE: Used drug store fixtures for sale. Call Dale Knight at (919) 494-2287.

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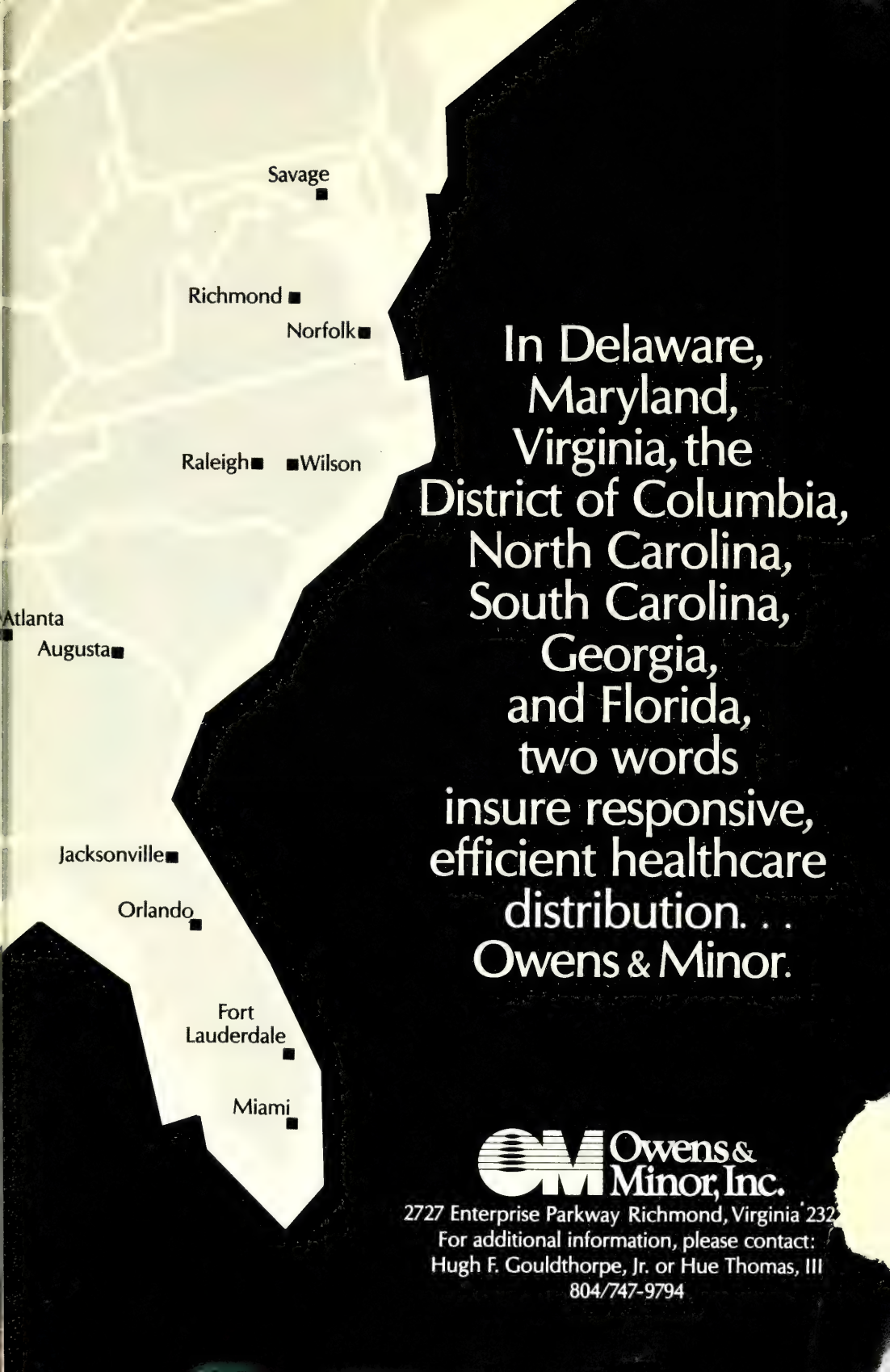

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